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EDITORIAL

The present issue of the Journal of Indian Health Psychology has twelve papers, two short communications and three book reviews. The research articles deal with variety of psychosocial issues in health and illness.

The first article by Asha and Hangal explores the effect of working status of women on the positive mental health. The second article was conducted with the objective to investigate the influence of the Spiritual Intelligence, Perceived Social Support on Quality of Life among married women. The findings indicated that there is a significant relationship between Spiritual Intelligence, Perceived Social Support and Quality of Life. Jayakumar, Velayudhan and Selvaraj aimed to find out the treatment outcomes for substance abusers with and without a history of ADHD symptoms in their childhood. The results showed that substance abusers with ADHD history experienced gradual increase in psychological distress and concluded that history of ADHD is a risk factor for later substance abuse. The next article enlisted examined frustration of adolescents with respect of areas, rural and urban. The following study enlisted in this issue by Yegletu and Raju aimed to explore opportunities and challenges for catering psychiatric services at Amanuel Mental Specialized Hospital. Gagandeep Kaur concluded that both status and level of employment plays an important role in promoting adaptive perfectionism and developing self efficacy among women. The next article in the list carried out an investigation with the aim to examine the impact of perceived stress and locus of control on conflict resolution styles. The results indicated more perceived stress, agitation and anxious behavior in girls as compared to their male counterparts. Annalakshmi Narayanan and Ragitha Radhakrishnan in their paper reported that the resilient individuals, compared to their low resilient counterparts, are more autonomous and showed more self-regulation for treatment. The highly resilient people accept the value of exercising as personally important to them. It is plausible that resilience may be a potential determinant of self regulation. P. C. Mishra and Minum Shyam aimed to find out the relationship between the different types of Needs and Job involvement in prison officers. The next investigation in this issue attempts to assess the prevalence of eating disorders among young female college students in Chennai.

(iv)

city. A.K. Srivastava and Anshula Krishna examined whether religion-specific cultures and life style cause significant variance in health status and reactions to illness of the people in different communities. Das Ambika Bharti and Anjana Mukhopadhyay in their article have emphasized the need of a befitting intervention for type D hypertensive patients to improve their psychological quality of life as well as to reduce expressive suppression among hypertensive patients irrespective of their personality type.

There are two articles enlisted in the section of short communications. Meera S. Neelakantan examined the relationship between emotional intelligence and self esteem. Jeetendra. K. Pansuriya compared stress among nurses working in private and government hospitals and it was found that level of stress is more in nurses working in private hospitals than government hospitals. At the end, reviews of current books have also been presented. All the articles are scholarly and will provide direction for young researchers. Editors are grateful to the contributors, referees and book reviewers for their valuable inputs.

ERRATUM

An article published in the Journal of Indian Health Psychology (Vol 6, No 1, September 2011, pp.-42-51) entitled "Effect of Diabetes Patient Education on Anxiety, Depression and Perceived Stress among Type 2 Diabetics" may be read as "Effect of Diabetes Patient Education on Psychological Stress and Depression among Type 2 Diabetics".

Editors

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GENERAL WELLBEING AND EMOTIONAL INTELLIGENCE OF WORKING AND NON-WORKING WOMEN

Asha P.* and Suneetha J. Hangal**

ABSTRACT

Health involves more than just simple absence of disease. Research on mental health throughout history has focused more on negative elements. Here, an attempt has been made to describe mental health in positive terms. General well-being and emotional intelligence are strongly correlated with both physical and psychological health. The present study examines the positive mental health of working and non-working women. PGI General Well-being Measure (1989) by Verma and Verma, and Emotional Intelligence Scale (2001) by Hyde, Dethle and Dhar were administered to a sample of 120 women (60 working and 60 non-working) in the age group between 25 and 60 years from the city of Hubli, Karnataka. The results showed that there is no significant difference between the working and non-working women with regard to general well-being. However, the two groups differ significantly in the overall emotional intelligence, and in the dimensions of self-awareness, self-motivation, emotional stability, commitment and empathy (significantly high).

Keywords: Well-being, Emotional Intelligence, Working Women.

Once upon a time, the adage 'Udyogam Purush Lakshnam' practically highlighted the family structure and gender norms of the Indian society, with men occupying the work-world and women running the family. However, the fact cannot be ignored that in olden days, women from lower strata of society too worked in the fields due to economic necessity. Nevertheless, one of the

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striking features of modern Indian society is that many women from upper and middle economic strata have entered the labour force due to various reasons like searching for an identity, making the best use of their knowledge, raising the standard of living, etc.

The multiple roles that women have ventured into have given rise to new set of challenges, both at the familial and societal levels. Many researchers have investigated the beneficial as well as the detrimental effects of multiple roles of women. Few studies (Goode, 1960; Kessler & McRae, 1982; Thoits, 1987) have argued that working status of women leads to role strain and decreased emotional well-being; a few other have (Sieber, 1974; Marks, 1977) counter-argued and highlighted the improvement in self-esteem as a result of working. Hence, an attempt has been made to study the impact of work on the mental health of women.

Siegerist (1941), the greatest historian of Medicine defined health in positive terms, "*Health is...not simply the absence of disease, it is something positive, a joyful attitude towards life and cheerful acceptance of responsibilities that life put upon the individual.*" The preamble of WHO's Charter defined health as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. Thus, positive health is nothing but the development of positive behaviour and experiences, which provide a buffer against illness, and help the individual to not only endure and survive but also to flourish.

WHO report (1981) on social dimension of mental health states, "*Mental health is the capacity of the individual, the group and the environment to interact with one another in ways that promote subjective well-being, the optimal development, and the use of mental abilities (cognitive, affective and relational), the achievement of individual and collective goals consistent with justice and the attainment and preservation of conditions of fundamental equality.*" Thus, mental health implies an individual's ability to enjoy life or obtain a balance between life activities, and efforts to achieve psychological resilience. So, mental health encompasses emotional well-being, self-efficacy, capacity to live a full and creative life, and the flexibility to deal with life's inevitable challenges. Whenever discussions about mental health would take place, researches throughout history have focused more on negative emotions. However, mental health is an umbrella term that covers many dimensions of life in positive zones. Well-being and emotional intelligence being closely related to mental health, an attempt has been made by this study to describe health in positive terms, and not merely as an absence of negative elements.

General well-being means subjective feeling of contentment, happiness, satisfaction with life experiences, and one's role in the world of work. Thus, subjective well-being refers to a person's evaluative reactions to his or her life,

either in terms of cognitive evaluations (satisfaction) or in terms of emotional reactions. One of the important principles of mental health is proper control and management of emotions, which otherwise leads to unipolar, bipolar, anxiety and depressive disorders, etc. Taylor (2001) argues that if one is emotionally intelligent, then he can cope better with life's challenges and control his emotions more effectively, both of which contribute to good psychological and physical health. Bar-On (1997) defined Emotional Intelligence. "*An array of non-cognitive capabilities, competencies and skills that influence one's environmental demands and pressures.*" Therefore, emotional intelligence is an important predictor of success in personal relations, family functioning and workplace.

Many studies have been conducted on correlating, general well-being, emotional intelligence and other variables. Sahoo and Mohapatra (2009) examined the role of professional settings in the psychological well-being of professionals, and found no gender difference in positive and negative affect experience. Self-efficacy and well-being of adolescents was investigated by Singh and Udainiya (2009), and the results revealed no significant effect of family type and gender on the well-being of students. A study by Joshi, Singh and Bindu (2009) revealed that subjective well-being accounted for considerable degree of variation between infertile and fertile women. Bhattacharya et al (2006) found that subjective well-being is positively correlated to extraversion and conscientiousness. Tong et al (2004) reported that students with stronger general self-efficacy have higher level of subjective well-being.

Gupta and Kumar (2010) noticed the relationship of mental health with emotional intelligence and self-efficacy among college students. Mukti Sha and Thingujam (2008), and Vijayalaxmi et al (2008) also studied emotional intelligence on students. Mohammadyfar, Khan and Tamini (2009) investigated the effects of emotional intelligence and occupational stress on the mental and the physical health of primary and high school teachers. The study by Dulewicz, Higgs and Slaski (2003) on managers demonstrated that emotional intelligence is strongly correlated with both physical and psychological health. Bar-On (1997) is of the opinion that emotional intelligence is an important predictor of success in personal relations, family functioning and workplace. As there is dearth of studies on working and non-working women in this area, the present study is an attempt to investigate positive mental health, that is, general well-being and emotional intelligence in working and non-working women.

Hypotheses

- 1) There is significant difference between the working and non-working women in their feeling of general well-being.
- 2) There is significant difference between the working and non-working women in emotional intelligence.

METHOD

Sample

It comprised of 120 women (60 working and 60 non-working) in the age group between 25 and 60 years from the city of Hubli, Karnataka. The purposive sampling technique was used to select the sample. Women working for less than three years were excluded from the study.

Tools

- 1) **PGI General Well-being Measure** (1989) by Verma and Verma. It is a 20-item scale. The scores range from 0 to 20. The test-retest reliability was 0.91 and according to the K. R. 20 formula was found to be 0.98; high validity is also reported.
- 2) **Emotional Intelligence Scale** (2001) by Hyde, Dethe and Dhar. It is a five-point scale with 34 items and has 10 dimensions. The maximum score is 170. The split-half reliability is found to be 0.88, and the content validity is as high as 0.93.

RESULTS

Table-1

Means and SDs of the Working and Non-working Women (60 in each group) on measures of General Well-being and Emotional Intelligence

Sl. No.	Measures/Dimensions	Groups	Mean	SD	t
1	General Well-being	W W	49.44	10.23	0.62
		N W W	50.56	9.78	
2	Emotional Intelligence				
A	Self Awareness	W W	51.28	9.09	2.12*
		N W W	47.46	10.56	
B	Empathy	W W	52.63	9.19	2.97**
		N W W	47.38	10.20	
C	Self- motivation	W W	51.88	9.27	2.08*
		N W W	48.13	10.42	
D	Emotional Stability	W W	51.87	10.21	2.16*
		N W W	48.12	8.82	
E	Managing Relations	W W	50.34	10.21	0.37
		N W W	49.67	9.84	
F	Integrity	W W	51.09	9.37	1.19
		N W W	48.91	10.57	
G	Self-development	W W	50.51	11.19	0.56
		N W W	49.49	8.70	

Contd. table 1...

Contd. table 1...

H	Value-orientation	W W	51.25	10.74	1.37
		N W W	48.75	9.12	
I	Commitment	W W	51.88	9.00	2.09*
		N W W	48.12	10.66	
J	Altruistic Behaviour	W W	50.56	10.06	0.61
		N W W	49.44	10.00	
	Total Emotional Intelligence	W W	52.00	8.73	2.52
		N W W	48.00	8.67	

WW=Working Women

*p<0.05, Significant

NWW=Non Working Women

** p<0.01, Highly Significant

Table 1 above shows that the group comprising of working women do not differ significantly from the group comprising non-working women ($t=0.62$, $p<0.05$) on general well-being. A perusal of the same table indicates that non-working women have more degree of general well-being than their counterparts do.

It is revealed from the table that the two groups differ significantly in the dimensions of self-awareness ($t=2.12$, $p>0.05$), self-motivation ($t=2.08$, $p<0.05$), emotional stability ($t=2.16$, $p<0.05$) and commitment ($t=2.09$, $p<0.05$). Highly significant difference between the two groups is also found in the dimension of empathy ($t=2.97$, $p<0.01$).

There is no significant difference between the working women and the non-working women on the dimensions of management of relations, integrity, self-development, value orientation and altruistic behavior. However, it is noticed that working women are slightly higher on these dimensions in comparison to their counterparts.

DISCUSSION

The results reveal that there is no significant difference between the working women and the non-working women in their feelings of general well-being. The result of the present study is similar to that of Varma and Dhawan (2006). The findings by Srimati and Kiran (2010) are in line with this result. They noticed that career opportunities and employment of women do not affect psychological well-being. Thus, the general assumption that role strain erodes emotional well-being does not hold true with regard to result this study.

The findings of the study show that working women differ significantly (high) in the dimension of empathy compared to the non-working ($t=2.97$, $p<0.01$). Empathy is the capacity to know emotionally what another is experiencing from within the frame of reference of that person, the capacity to sample the feelings of another or to put one's self in other's shoes (Berger, 1987). As empathy is one of the important prerequisites in developing and

maintaining good relations, working women are able to recognize and share the feelings that are being experienced by others.

It is also evident that the two groups differ significantly with regard to self-awareness ($t=2.12$, $p<0.05$) and self-motivation ($t=2.08$, $p<0.05$). The working women seem to know their internal states, preferences, resources and limitations. They are capable of accurate self-assessment and have self-confidence. Shukla and Saxena (1988) have observed that working women believe in self-growth.

As utilizing one's emotional energy leads to high motivation, increased problem solving and improved decision-making skills, the working women are able to motivate themselves towards success and persist in the face of frustration.

It is also observed that the two groups differ significantly in emotional stability ($t=2.16$, $p<0.05$), commitment ($t=2.09$, $p<0.05$) and in overall emotional intelligence ($t=2.52$, $p<0.05$). This result is in consistent with the result obtained by Bhattacharjee and Bhatt (1983) who have reported that working women are better adjusted, more stable and experience less psychological conflict in comparison to non-working women. The findings of this study are also corroborated by the result obtained by Azar & Vasudevi (2006) who noticed that working women have more commitment. Enjezab (2003) and Shukla (1988) have also found that working women are committed to interpersonal relationships, family and self. In general, they have a fundamental sense of worthiness. It is argued that multiple roles can enhance the well-being by offering multiple opportunities for increased status, management of emotions particularly when people are committed to the roles they occupy. Hence, one can see the positive impact of the number of roles held by an individual. Gove & Zeiss (1987), Verbrugge (1982) and Thoits (1983) too have found the positive effect of employment.

However, the two groups do not differ significantly with regard to self-awareness, management of relations, integrity, self-development, value orientation and altruistic behaviour. This can be discussed from the viewpoint that the sample as a whole belongs to the urban educated groups, and they are well aware that negative emotional states are associated with unhealthy patterns of physiological functioning. They have the knowledge that emotions make or mar man/woman. Hence, through mass media and vicarious leaning, they have managed to control their emotions for their own benefit and others.

CONCLUSIONS

- 1) There is no significant difference between the working and non-working women with regard to their feeling of general well-being.
- 2) Working women differ significantly from the non-working women in the overall emotional intelligence as well as in self-awareness, empathy, self-motivation, emotional stability, and commitment.

- 3) The two groups do not differ significantly with regard to management of relations, integrity, self-development, value orientation and altruistic behaviour.

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INFLUENCE OF SPIRITUAL INTELLIGENCE AND PERCEIVED SOCIAL SUPPORT ON QUALITY OF LIFE AMONG MARRIED WOMEN

S. Shobhana* and T. Lavanya**

ABSTRACT

The objectives of the present study were (1) to find out the relationship between Spiritual Intelligence, Perceived Social Support and Quality of Life among married women, and (2) to investigate the level of influence of the various dimensions of Spiritual Intelligence, Perceived Social Support on Quality of Life among married women. The study was ex post facto in nature, and convenient sampling technique was adopted. 100 married women living in Chennai who were between the age group 30 and 60 years and their years of married life were between 4 and 40 years, were part of the present study. Findings indicated that there is a significant relationship between Spiritual Intelligence, Perceived Social Support and Quality of Life. Spiritual Intelligence is identified as a better predictor than Perceived Social Support on the Quality of Life among married women. Further, it was observed that the Personal Meaning Production dimension of Spiritual Intelligence and the Family dimension of Perceived Social Support were found to have a better predictive value in contributing to the Quality of Life among married women. Other demographic variables under study did not show any significant differences on the Spiritual Intelligence, Perceived Social Support and Quality of Life. Thus, the findings reflected that family social support; and creating a purposeful life with definite goals and also appreciating the meaning and essence of one's own life while balancing the pleasure and pain are the crucial intrinsic as well as extrinsic factors contributing to better Quality of Life among the contemporary married women.

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Keywords: Spiritual Intelligence, Perceived Social Support, Quality of Life

A very important aspect of India in the recent past is the emergence of the 'New Age Woman'. Women in India are predominantly homemakers, though this perspective is changing. In many places, especially metros and other cities, women are the bread earners of the house or are at par with their male counterparts. The increase in the cost of living/economy has also contributed to the rise in this aspect. Today's women are seen as intelligent decision makers who are in the forefront in many areas of social, political, business and academic spheres. In such a constantly transforming role of today's women both at home and outside home, it is essential to know what the perceived quality of life that women experience is. Many factors will influence the quality of life women possess in the current scenario. It is important that one looks at some of the important factors that could influence their quality of life.

It can be observed that overall development and improving the quality of life is the ultimate goal that everyone wants to achieve in this stressful and fast lifestyle and particularly of the women folk. In spite of developments in technology and living standards and life expectation, etc., one can witness psychological and behavioural related problems as more prevalent nowadays. Thereby, identifying how environmental and personal variables or how extrinsic and intrinsic factors affect or contribute to one's quality of life, would be of help in forming a general opinion regarding quality of life and the factors contributing to quality of life. It can also strengthen in organising programmes to emphasise the importance of quality of life, and achieve general, moderate to good quality of life. Further, it facilitates in identifying what factors contribute to have good quality of life. This is an important aspect as quality of life is subjective and tends to vary. As Spiritual Intelligence is an important intrinsic variable and Social Support as an extrinsic variable which can affect one's quality of life especially among women, they are considered for the present study.

The objectives of the study include:

1. finding out the influence of the various dimensions of Spiritual Intelligence and Perceived Social Support and also as aggregate on Quality of life among married women.
2. finding out the relationship between age and Spiritual Intelligence, Perceived Social Support and Quality of life among married women.

Spiritual Intelligence

Danah Zohar coined the term 'spiritual intelligence' and although many definitions have been proposed, David King (2008) defined Spiritual Intelligence as, "*A set of adaptive mental capacities which are based on nonmaterial and transcendent aspects of reality, specifically those which are related to the nature of one's existence, personal meaning, transcendence, and expanded states of*

consciousness. When applied, these processes are adaptive in their ability to facilitate unique means of problem-solving, abstract-reasoning, and coping."

Social support is a concept that is generally understood in an intuitive sense, as the help from other people in a difficult life situation. One of the first definitions was put forward by Cobb (Cobb, 1976); he defined social support as, "The individual belief that one is cared for and loved, esteemed and valued, and belongs to a network of communication and mutual obligations."

The definition of QoL adopted by the WHOQoL Group (1994) is: "An individual's perception of his/her position in life in the context of the culture and value systems in which he/she lives, and in relation to his/her goals, expectations, standards and concerns. It is a broad-ranging concept, incorporating in a complex way the person's physical health, psychological state, and level of independence, social relationships, and their relationship to salient features of their environment."

Hypotheses

The hypotheses of the present study are framed based on the research reviews provided by earlier researchers like Paranjape and Kaslow (2009), Yoon and Lee (2006), Kendler et al., (2005), Teichmann et al., (2005), Walsh (2005), Koeing (2004). Also, taken from Rao (2005), Reese and Kaplan (2000), Walen and Lachman (2000), Spalding et al., (1997), Pittman and Lloyd (1988), and Amaro et al., (1987).

1. Spiritual Intelligence would significantly influence the QoL among married women.
2. Perceived Social Support would significantly influence the QoL among married women.
3. The various dimensions of Spiritual Intelligence and Perceived Social Support would significantly influence the dimensions of QoL among married women.

Further, as there are no relevant reviews available reflecting the other aspects of the objectives of the study, null hypotheses were formulated.

METHODS

The study is ex post facto in nature. The sample for the present study was selected using convenient sampling technique.

Sample

The sample selected for the present study was based on the following inclusion criteria.

Inclusion Criteria

1. Only women who are married.
2. They should be between 30 and 60 years of age.

3. They should have completed at least graduation level of education.
4. They should be residing in Chennai city.
5. While accepting the sample for the study, it was kept in mind that none of the women suffered from any major chronic or psychiatric illness, as it would have had direct effect on QoL of the individual, which is beyond the objective of the present study.

For the present study, 120 married women living in Chennai city were distributed with questionnaires. As some of the questionnaires were not completed, they were rejected. A final sample of 100 married women was taken for the present study. 52 women were between the age groups of 30 and 43 years, and 48 women were between the age groups of 44 and 60 years. 50 women were between 4 and 19 years of married life, and 50 women were between 20 and 40 years of married life.

Tools Used

1. The Spiritual Intelligence Self – Report Inventory by King - (2008)
The Spiritual Intelligence Self Report Inventory was modified by the researcher and was validated and standardised on the Indian sample. The reliability was found to be 0.914.
2. The Multi-Dimensional Scale of Perceived Social Support by Zimet, Dahlem, Zimet and Farley – (1988).
3. WHOQoL-100 by the WHOQoL Group, Division of Mental Health, World Health Organization – (1998).

Statistical Analysis

't' test, Regression analysis and correlation were used for the analysis of the data in the present study.

RESULTS AND DISCUSSION

Regression analysis is carried out to understand the predictive relationship between variables. In this study, the objective was to understand the predictive value of Spiritual Intelligence and Perceive Social Support on QoL.

The results indicate R^2 of 0.11 indicating an 11% of variance in QoL is predicted by Spiritual Intelligence and Perceived Social Support. The model fit found to be significant with an F value of 5.98 ($P < .004$). The Beta coefficient of Spiritual Intelligence is 0.29 and the obtained t value is 2.96 shows the significance of predictive relationship. This implies that with every one unit of increase in the Spiritual Intelligence there is a likelihood of increase in QoL by 0.29. The Beta coefficient of Perceived Social Support is 0.13, which is not significant. This implies that Perceived Social Support score do not add much to the Quality of Life score. It can be inferred that Spiritual Intelligence is a better predictor than Perceived Social Support of QoL.

TABLE 1

The summary and the Beta values, and their significance for Spiritual Intelligence and Perceived Social Support on QoL among married women

Model	Predictors	Unstandardised Coefficients		Standardised Coefficients	P-value
		B	Standard Error	Beta	
1.00	(Constant)	369.84	45.06		0.00
	SI Total	1.56	0.53	0.29	0.00**
	PSS Total	9.70	6.97	0.13	0.17(NS)
	R	R ²	Adjusted R ²	F	
	.331	0.11	0.09	5.98**	

**Significant at 0.01 level

Key

SI Total – Spiritual Intelligence Total

PSS Total – Perceived Social Support Total

Hypothesis I, which states that there would be a significant relationship between Spiritual Intelligence and QoL among married women, is **accepted**.

Hypothesis II, which states that there would be a significant relationship between Perceived Social Support and QoL among married women, is **rejected**.

DISCUSSION

Spiritual Intelligence was found to be a better predictor of QoL than Perceived Social Support. These abilities also contribute in gaining awareness integration and helps in adapting to life challenges. Spiritual Intelligence is an intrinsic factor, which helps a person to learn, to be sure and be in touch with their core self. It contributes to a better understanding of one's own personalities, emotions, values, beliefs, and their whole self and of the outer world of others, situations or events, etc. Further, it could help a person to perceive their own self and the outer world in a much broader and a bigger picture. This could help them in appreciating the human nature and the perfection in the imperfection of nature, which helps to forgive and embrace their mistakes and have a positive mind frame to try to grow in person. This internal balance and calmness helps a person to have a level headedness and can better handle situations, relationships, develop a better and positive perspective of their own psychological factors, helps one to better cope up with events, environment, pain and to a better health thereby contributing to have a better QoL. Factors that could contribute to a person's orientation to self for better QoL are life experiences, both extremes, like getting into a loving relationship, career etc, age could also give varied experiences in terms of relationships, career, retirement, birth, death, etc, all of these varied experiences helps a person to a better understanding and growth in a person. Hence, Spiritual Intelligence and orientation towards self could have an

effect on QoL of an individual. It is also observed that Social Support system of an individual could help a person to a certain extent to cope with life challenges and could contribute to QoL.

The present study showed Social Support was not significantly contributing to QoL. The reasons could be that Social Support is an extrinsic factor and so, even if a good support system could help in coping they might not have a great contribution towards facing and dealing with life challenges. A person could experience anxiety, confusion, depression etc, in experiencing life situations and the perception of the individual matters a lot in coping with difficult situations. These factors (intrinsic), could affect an individuals' QoL and the support system could only help a person to a certain extent in coping up. Hence, one could say that Social Support might help in improving a persons' QoL, but they could not have a significant contribution towards QoL, as it would not be able to reduce the effect of many other factors influencing QoL of a person.

The objective was to understand the predictive value of the various dimensions of Spiritual Intelligence, and Perceive Social Support on domain II of QoL; hence, regression analysis was used. The results are presented in table 2.

TABLE-2

The summary and the Beta values, and their significance for Spiritual Intelligence and Perceived Social Support on Domain II of QoL among married women

Model	Predictors	Unstandardised Coefficients		Standardised Coefficients	P-value
		B	Standard Error	Beta	
1.00	(Constant)	49.36	8.35		0.00
	CET	-0.36	0.40	-0.14	0.36
	TA	0.27	0.39	0.11	0.50
	PMP	1.48	0.59	0.39	0.01**
	Friends	-1.48	1.00	-0.15	0.14
	Family	1.96	1.35	0.17	0.15
	Significant other	-0.26	1.34	-0.03	0.85
	R	R ²	Adjusted R ²	F	
	.441	0.19	0.14	3.74**	

**Significant at 0.01 level

Key

CET – Critical Existential Thinking

TA – Transcendental Awareness

PMP – Personal Meaning Production

The obtained R² of 0.19 indicates a 19% of variance in domain II of QoL is predicted by the independents and the model fit was significant with an F value

of 3.74 ($P < .002$). The Personal Meaning Production of Spiritual Intelligence was the only significant predictor with a Beta coefficient of 0.39 (t ; 2.49; $P < .01$). This implies that with every one unit of increase in the Personal Meaning Production of Spiritual Intelligence there will be an increase in the score of domain II of QoL by 39%. Rest of the components did not have any significant predictive power. The objective was to understand the predictive value of the various dimensions of Spiritual Intelligence and Perceive Social Support on domain IV of QoL; hence, regression analysis was used. The results are presented in table 3.

TABLE-3

The summary and the Beta values, and their significance for Spiritual Intelligence and Perceived Social Support on Domain IV of QoL among married women

Model	Predictors	Unstandardised		Standardised Coefficients	P-value Coefficients
		B	Standard Error	Beta	
1.00	(Constant)	43.66	7.10		0.00
	CET	-0.31	0.34	-0.15	0.36
	TA	0.34	0.33	0.17	0.31
	PMP	0.34	0.50	0.11	0.50
	Friends	0.82	0.85	0.10	0.33
	Family	2.63	1.15	0.28	0.03*
	Significant other	0.60	1.14	0.07	0.60
	R	R ²	Adjusted R ²	F	
	.410	0.17	0.11	3.13**	

*Significant at 0.05 level

**Significant at 0.01 level

Key

CET – Critical Existential Thinking.

TA – Transcendental Awareness

PMP – Personal Meaning Production

The obtained R^2 of 0.17 indicates a 17% of variance in domain IV of QoL is predicted by the independents and the model fit was significant with an F value of 3.13 ($P < .008$). The Family dimension of Perceived Social Support was only a significant predictor with a Beta coefficient of 0.28 (t ; 2.28; $P < .03$). This implies that with every one unit of increase in the Family dimension of Perceived Social Support there will be an increase in the score of domain IV of Quality of Life by 28%. Rest of the components did not have any significant predictive power. The objective was to understand the predictive value of the various dimensions of Spiritual Intelligence and Perceive Social Support on

domain VI of Quality of Life; hence, regression analysis was used. The results are presented in table 4.

TABLE-4

The summary and the Beta values, and their significance for Spiritual Intelligence and Perceived Social Support on Domain VI of QoL among married women

Model	Predictors	Unstandardised Coefficients		Standardised Coefficients	P-value
		B	Standard Error	Beta	
1.00	(Constant)	35.78	9.09		0.00
	CET	0.33	0.43	0.11	0.45
	TA	-0.55	0.42	-0.19	0.20
	PMP	2.72	0.65	0.60	0.00**
	Friends	-2.00	1.09	-0.17	0.07
	Family	1.80	1.47	0.13	0.22
	Significant other	0.60	1.46	0.05	0.68
	R	R ²	Adjusted R ²	F	
	.586	0.34	0.30	8.11**	

**Significant at 0.01 level

Key

CET – Critical Existential Thinking

TA – Transcendental Awareness

PMP – Personal Meaning Production

The obtained R² of 0.34 indicates a 34% of variance in domain VI of QoL is predicted by the independents and the model fit was significant with an F value of 8.11 (P<.000). The Personal Meaning Production of Spiritual Intelligence was only a significant predictor with a Beta coefficient of 0.60 (t; 4.22; P<0.00). This implies that with every one unit of increase in the Personal Meaning Production of Spiritual Intelligence there will be an increase in the score of domain VI of Quality of Life by 60%. Rest of the components did not have any significant predictive power. The objective was to understand the predictive value of the various dimensions of Spiritual Intelligence and Perceive Social Support on QoL; hence, regression analysis was used. The results are presented in table 5.

The obtained R² of 0.21 indicates a 21% of variance in QoL is predicted by the independents and the model fit was significant with an F value of 3.99 (P<.001). The Personal Meaning Production of Spiritual Intelligence and Family dimension of Perceived Social Support were only the significant predictors with Beta coefficients of 0.31 (t; 1.95; P<0.05) and 0.25 (t; 2.09; P<0.04). This implies that with every one unit of increase in the Personal Meaning Production of Spiritual Intelligence there will be an increase in the score of Quality of Life

by 31% and with every one unit of increase in the Family dimension of Perceived Social Support, there will be an increase in the score of QoL by 25%. Rest of the components did not have any significant predictive power.

TABLE-5

The summary and the Beta values, and their significance for Spiritual Intelligence and Perceived Social Support on General Domain of QoL among married women.

Model	Predictors	Unstandardised Coefficients		Standardised Coefficients	P-value
		B	Standard Error	Beta	
1.00	(Constant)	332.80	45.17		0.00
	CET	-1.02	2.15	-0.07	0.64
	TA	1.45	2.09	0.11	0.49
	PMP	6.26	3.21	0.31	0.05*
	Friends	-6.27	5.40	-0.12	0.25
	Family	15.27	7.32	0.25	0.04*
	Significant other	2.58	7.26	0.04	0.72
	R	R ²	Adjusted R ²	F	
	.452	0.21	0.15	3.99**	

*Significant at 0.05 level

**Significant at 0.01 level

Key

CET – Critical Existential Thinking

TA – Transcendental Awareness

PMP – Personal Meaning Production

Hypothesis-III, which states that there would not be a significant relationship between various dimensions of Spiritual Intelligence, perceived social support and QoL among married women is partially accepted.

Personal Meaning Production of Spiritual Intelligence was a predictive factor for an increase in Psychological domain, Spirituality/Religion/ Personal beliefs domain and the overall QoL and health domain of QoL. Personal Meaning Production defines the ability to derive personal meaning and purpose from all physical and mental experiences, including the capacity to create and master (i.e. live according to) a life purpose. This dimension clearly defines the possibility of affecting the psychological factors of an individual. An individual's perceptions and views and meaning will influence the emotions felt by an individual, their self esteem, also their perception of their body and appearance and can have a definite effect on an individual's abilities like learning, memory, thinking process and affect their concentration. As psychological factors have direct effect on a person's mental well being, it can affect their QoL even more as it is subjective, and could change according to an individual's perception of the intrinsic and

external factors. Further, ones' perceptions of experiences affect a person's beliefs and views, and the person tries to find a personal meaning. Finding life's purpose influences the person's spiritual and religious views. In addition, Family dimension of Perceived Social support was a predictive factor for an increase in Social Relationships domain and overall QoL and health domain of QoL. The family dimension could include their children, spouse and their extended family members. In the middle age, particularly for women, family has a great influence on their well-being and the perception of their QoL. Family could form the core of their relationships. Members of the family could be a part of women's personal relationships, and could form the main support system for an individual. Their ability to provide or not could have a major effect on a person's relationships. The spouses are the closest relation for an individual, and their role and relationship could in a major way affect a person's perception of the support they receive. Their sexual life could also affect the spousal relationship and support. Hence, family members could have a great influence on person's social relationship and this could have an effect on their QoL, as relationships are one of the major factors that could affect an individual's emotions and their perceptions.

CONCLUSION

From the findings of the present study, it is concluded that there is a significant relationship between Spiritual Intelligence, Perceived Social Support and QoL. Spiritual Intelligence is identified as a better predictor than Perceived Social Support on the QoL among married women. Further, on analysing the relationship between the various dimensions of Spiritual Intelligence, Perceived Social Support and QoL, it was observed that the Personal Meaning Production (PMP) dimension of Spiritual Intelligence alone contributed for a better QoL; the Family dimension of Perceived Social Support was found to be a better predictive factor in contributing to the Overall QoL of married women. The other demographic variables under study did not show any significant difference on the Spiritual Intelligence, Perceived Social Support and QoL among married women. Hence, we may conclude that Family Social Support; and creating a purposeful life with definite goals, and also appreciating the meaning and essence of ones' own life while balancing the pleasure and pain, are the crucial intrinsic as well as extrinsic factors contributing to better QoL among the contemporary married women.

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HISTORY OF CHILDHOOD ATTENTION DEFICIT HYPERACTIVITY DISORDER: CONSTRAINT IN THE TREATMENT OF SUBSTANCE ABUSE

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ABSTRACT

ADHD is commonly encountered in both adolescent and adult substance abuse treatment programmes. This study aimed to find out the treatment outcomes for substance abusers with and without a history of ADHD symptoms in their childhood. 81 substance abusers were admitted in de-addiction centres, and their parents were approached for this study; out of 81 substance abusers, 68 (N) patients' data were found to be robust for the analysis. Wender Utah Rating Scale (WURS) was administered on substance abusers admitted for de-addiction, and Parental Rating Scale (PRS) was administered to their parents to confirm the same. General Health Questionnaire (GHQ) was administered to assess the psychological distress. Based on WURS and PRS, treatment-seeking substance abusers were categorized as substance abusers with a history of ADHD, that is, n=17 patients and substance abusers without a history of ADHD, that is, n=51 patients. These two groups were compared for their treatment outcomes in terms of their experienced psychological distress as well as the age of onset of substance use/abuse, variety of drugs tried, period of use/abuse and litigations /violations of law. The results showed that substance abusers with ADHD history experienced gradual increase in

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psychological distress during the three phases of assessment (at the time of discharge, first and second follow-up). This study concluded that history of ADHD is a risk factor for later substance abuse. Treating substance abuse ignoring the history of ADHD will defeat the purpose and will not contain the risk for relapse. This study suggested that the clinical practitioners should keep this information in mind while treating substance abuse.

Keywords: ADHD, Substance abuse, Retrospective diagnosis

The causes for substance use/abuse are multi-factorial, and involve a complex and incompletely understood interaction between genes and environment. Treatment success for substance use/abuse depends on so many psycho-socio-physiological factors. A growing body of research has implicated co-morbid conditions as a major mediator of treatment success among individuals seeking treatment for substance use disorders. Over the last decade, research has shown that clients under treatment for addictive disorders, who present an additional psychiatric diagnosis, are more likely to fail to engage in the treatment process, to leave treatment before completion, and to experience relapse after treatment compared to patients without the co-morbid conditions (Barrowclough et al., 2001; Reiger et al., 1990; Smith and Hucker, 1994).

Substance Use Disorders (SUD) is seen more commonly in those with ADHD than the general population (Schubiner, 2005). ADHD is a common disorder in children that frequently persists into adulthood (Schubiner, 2005). Wilens et al., (1995) reviewed various studies of ADHD adults, and have consistently found an elevated prevalence of SUDs: 17–45 per cent of ADHD adults have histories of alcohol abuse or dependence, and 9–30 per cent had histories of drug abuse or dependence. Biederman et al.'s (1995) study of never-treated adults with ADHD found that the risk of SUD developing over the lifespan in an ADHD individual is two-fold compared to Non-ADHD adults (52% vs. 27%, respectively). Molina & Pelham, 2003 found that although, a history of conduct or bipolar disorders increases that risk, ADHD is an independent risk factor for later SUD.

ADHD is a common disorder in which both genetic and psychosocial aetiologies have been implicated (Faraone & Biederman, 1998; Faraone, 2004). Sigmund Freud (1930) once stated that the child is the parent of the adult, and where mental disorders are concerned, he was right - the problems people experience as adults are often visible much earlier in life. Recognition of this basic fact is one reason behind the increasing importance given to developmental perspective on mental disorders. The view that problems and difficulties experienced during childhood or adolescence can play an important role in emergence of various disorders during adulthood.

Carroll and Rounsavilli (1993) found that subjects with ADHD reported more severe substance use, earlier onset and more frequent and intense use of

cocaine and higher rates of alcoholism. According to Modigh et al. (1998), every third substance abuser had ADHD. Further, individuals with symptoms of ADHD and Conduct Disorder are at risk for Substance Abuse (Flory et al., 2003). Some studies, however, did not find an independent association between ADHD and adolescent SUD. The study by Disney et al. (1999) found no association between ADHD and SUD after adjusting for the presence of CD in a cross-sectional community-based sample of adolescents. Moreover, in a school sample of 11–15-year-olds, Molina et al. (1999) found that ADHD comorbid with CD were associated with elevated substance use over ADHD alone and CD alone. There are differences in pronouncing ADHD as a risk factor for later Substance Abuse. Diagnosing Childhood ADHD retrospectively is a challenging task. In 1993, Ward et al. have published a scale called Wender Utah Rating Scale (WURS) which is widely used for screening adults for childhood ADHD symptoms. This scale, based on Wender Utah Criteria for ADHD (Ward, Wender and Reimherr, 1993) includes commonly observed symptoms found in children with ADHD, and is a very useful screening tool. However, using another tool along with the WURS would increase the reliability of the screening outcome. For this purpose Parental Rating scale by Conner (1973) was used.

In this study, an attempt has been made to diagnose childhood ADHD retrospectively among treatment seeking substance abusers and the treatment outcome was compared with the Non-ADHD substance abusers. There is a huge dearth in the native literature related to treatment outcomes of substance abusers with and without antecedent of ADHD.

Based on the reviews, the research question mooted in this study is "Whether the treatment outcome for the substance abuse will be different for the retrospectively diagnosed ADHD group and the Non-ADHD group?" The objective is to compare the psychological distress experienced between the groups during the course of treatment for substance abuse.

METHOD

Sample

The Study was conducted in Coimbatore City. Through purposive sampling, as many as 81 patients who were admitted in the De-addiction Centre, Psychiatric Hospitals and Clinics for Substance Abuse were approached. Secondly, mothers of these patients were also included in the assessment, and if mothers are no more, fathers of these patients were included.

Tools

Wender Utah Rating Scale (WURS) by Ward, Wender and Reimherr (1993) was used to diagnose childhood ADHD retrospectively. It has 25 items with 4 choices. A cut off score of 46 or above shows greater differences

between patients with ADHD and normal subjects. (Split-half reliability correlation was $r=0.90$ and validity was $r=0.49$). Mannuzza and colleagues (1991) found that among individuals diagnosed with ADHD in childhood and followed into adulthood, a substantial minority of the sample could not recall their childhood ADHD symptoms as adults. To overcome this possible problem, Parental Rating Scale was used.

Parental Rating Scale (PRS) is a modified version of Conner's Abbreviated Rating Scale (1973) which consists of 10 items with four choices. A score of 12 or more places someone above the 95th percentile of childhood hyperactivity. Validity is $r=0.49$. Parents (particularly mothers) have to recollect his/her child's behaviour when their child was between 6 and 10 years old.

General Health Questionnaire (GHQ) developed by D. Goldberg is a self-administered screening instrument designed to detect current psychological distress. It has 28 items with four choices. A cut off score of four and above separates cases from non-cases.

Procedure

The assessment was done in four stages after taking informed consent from both patients and their parents. In the first stage, on the day of admission for treatment, after collecting demographic details, patients were administered GHQ, and after few days of detoxification, WURS was administered and their parent particularly mothers' were administered PRS. In the second stage, GHQ was given to the patients on the day of discharge which takes between 2 weeks usually to a month or more depending on the severity of the complaint and recuperation. In the third stage, GHQ was given to the patients on the first follow-up (usually 1-2 weeks) and on the final stage, GHQ was given to the patients second follow-up (usually 3-4 weeks). Out of the 81 patients, only 68 (N) participants formed the sample as the remaining 13 were excluded due to lack of clarity/or understanding on the part of the patients' or their parent response to the scales administered and due to drop out during the course of treatment or follow-up. In a sample of 68 participants, 57 (n) were male patients and one was female. Majority of the patients came from urban and semi-urban areas. 17 (n) patients were retrospectively diagnosed for Childhood ADHD with cut-off scores on WURS >46 (Mean=55.17, SD=8.08) on PRS >12 and the remaining 51(n) participants had lesser scores on both WURS (Mean=29.50, SD=10.72) and PRS <12. WURS scores significantly differentiated both the groups ($t=9.03$; $p<0.01$). This is in line with Ponce Alfaro et al. (2000) who concluded that among alcoholic patients exists a substance abusers group with high scores in the WURS, which could indicate high rates of ADHD in early ages. There is a significant correlation between WURS scores (mean=35.92, SD 15.06) and PRS scores (mean=10.39, SD 8.56) for the sample. This correlation value ($r=0.57$) shows the consistency in scoring pattern between the participants

as well as their parents. This makes the scale more reliable in screening childhood history of ADHD among substance abusers. This is consistent with the findings of Ward, Wender and Reimherr (1993) who reported that the correlation between WURS scores and PRS scores were impressive. Treatment outcome in terms of their psychological distress level were compared between the ADHD group ($n=17$) and the Non-ADHD group ($n=51$). The mean age of ADHD group was 32.7 ($SD=7.1$) years and for Non-ADHD group was 35.9 ($SD=6$) years. Data obtained was analysed using Kolmogorov-Smirnov Test and Repeated Measures ANOVA.

RESULTS AND DISCUSSION

The results highlight the existence of a subgroup with a history of ADHD among the treatment seeking substance abusers group. Based on the WURS scores and the PRS scores the sample was divided into ADHD group and Non-ADHD group. Both these groups were compared for the age of onset of substance use/abuse, duration of substance use/abuse, multiplicity of drugs and conflict with the law. The age of onset for ADHD group was significantly lower compared with Non-ADHD group (Table 1). The average age difference between the onsets for both the group is almost 6 years ($K-SZ$ value is 3.01, $p<0.05$). Modestin et al. (2001) found that drug addicts with a history of ADHD seem to start at a younger age. This suggests a link between ADHD and early onset of substance abuse. ADHD predicts an earlier age of substance dependence onset, a more rapid transition from use to abuse and dependence, and longer duration of substance use disorder (Riggs et al., 2004; Schubiner et al., 2000; Sullivan and Rudnik-Levin., 2001; Latimer et al., 2004; Levin et al., 2004; Wilens., 2004). This could be attributed to the self-medication to moderate the adverse reminiscent symptoms of ADHD.

TABLE-1

Distribution of age, duration, types of drugs and substance related litigation among treatment seeking participants

	ADHD Group ($n=17$)		Non-ADHD Group ($n=51$)		Absolute	Positive	Negative	K-SZ
	Mean	SD	Mean	SD				
Age of onset	15.58	1.97	21.27	3.02	.834	.000	.043	3.01*
Duration in years	16.17	5.15	13.31	5.54	.333	.333	.020	1.19
Types of drugs	2.35	0.78	1.80	0.56	.216	.216	.000	0.77
Litigation	0.64	0.49	0.17	0.38	.471	.471	.000	1.68*

K-SZ: Kolmogorov – Smirnov test * $p<0.05$ level

On comparing the duration of substance use, the ADHD group has longer period in years (mean=16.17, $SD=5.15$) than the Non-ADHD group (mean=13.31,

SD=5.54). Even though there is a higher duration for ADHD group, this is not statistically significant (K-SZ value is 1.19, $p>0.05$). ADHD SA group has longer relationship with the substances, which is in line with the findings of Sullivan & Rudnik Levin (2001) that ADHD subjects have longer duration of SAD. Interestingly, in this sample, the Non-ADHD SA group also has longer history of substance use/abuse. While self-medication could be a possible reason for prolonged usage for the ADHD group, addiction could be an explanation for the Non-ADHD group's prolonged use/abuse. Hence, both these groups do not differ in the duration of usage of substances.

The ADHD group has tried more varieties of drugs (Maximum 4) than Non-ADHD group. K-SZ value (0.77) suggests that there is no significant statistical difference between the groups on the types of drugs used/abused. This does not support the view of Biederman et al (1995) findings that ADHD group has higher rates of drug plus substance use disorder than Non-ADHD group. In this study, it was found that alcohol and nicotine were the most widely abused substances. It could be because of easy availability and tolerability by the society. Very few participants admitted that they have tried other types of drugs also.

From Table-1 it is clear that ADHD group had difficulties with law enforcing authorities. Due to the sensitivity, there is enough scope to assume that, not many participants and their parents would be accurately revealing this data due to reservations or discomfort. There is a higher tendency to suppress or deny these facts. From the supposedly minimal data provided by the participants, it is clear that ADHD group has committed more offence (mean=0.64, SD=0.49) under the influence of substance than the non- ADHD group (mean=0.17, SD=0.38). The difference is statistically significant (K-SZ value is 1.68, $p<0.05$). ADHD group have an internal endowment, which puts them at higher risk for social maladjustment. Children with ADHD are more likely to engage in antisocial and drug-related activities and to be arrested. (Barkley et al., 2004; Rutter, Giller and Hagel, 1999).

Psy

GHQ

Pre-tr

Post-tr

Follow

Follow

Appro

GHQ

** Sig

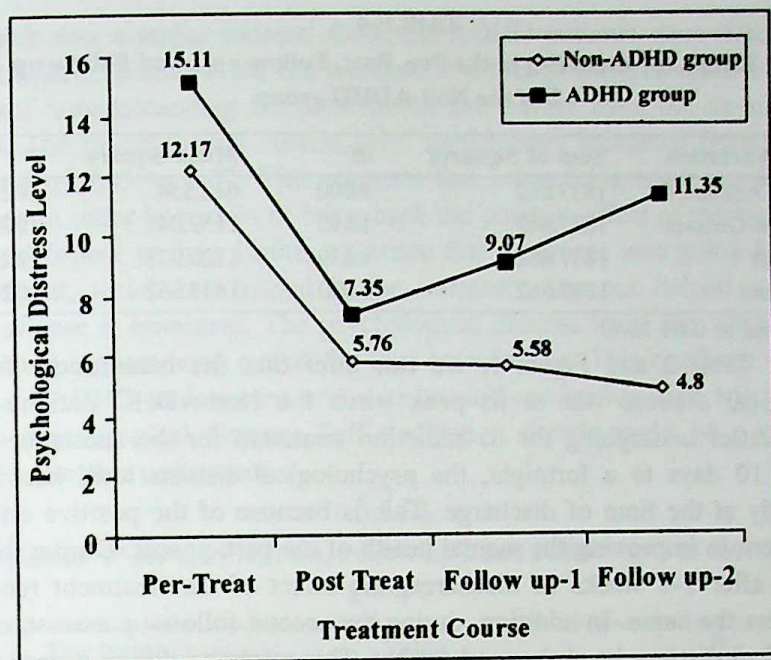


Figure-1: Treatment Outcome for ADHD and Non-ADHD Groups

TABLE-2

Psychological Distress level in terms of GHQ scores for Non-ADHD group (n=51)

GHQ Scores	Mean	Standard Deviation
Pre-treatment (Day of Admission)	12.17	4.76
Post-treatment (Day of Discharge)	5.76	2.38
Follow up-1 (1-2 Weeks after discharge)	5.58	2.46
Follow up-2 (3-4 Weeks after discharge)	4.80	2.45

TABLE-3

Approximate 'F' for the Pre, Post, Follow up 1 and Follow up 2 of the Non-ADHD group

Test Name	Value	F
Pillai's	0.754	49.11**
Wilk's	0.246	49.11**
Hotelling's	3.069	49.11**
Roy's	3.069	49.11**

** Significant at 0.01 level Hypothesis df = 3.00

Error df=48

TABLE-4

'F' Ratios for the GHQ in the Pre, Post, Follow up 1 and Follow up 2 of the Non-ADHD group

Source of Variation	Sum of Squares	df	Mean Square	F
Sphericity Assumed	1837.662	3.000	612.554	102.710**
Greenhouse-Geisser	1837.662	1.595	1152.041	102.710**
Huynh-feldt	1837.662	1.639	1120.978	102.710**
Lower-bound	1837.662	1.000	1837.662	102.710**

** significant at 0.01 level

From Table-2 and Figure-1, we can infer that the mean score for the psychological distress was at its peak when the Non-ADHD patients were admitted. After undergoing the de-addiction treatment for the substance abuse for about 10 days to a fortnight, the psychological distress level has dipped significantly at the time of discharge. This is because of the positive effect of the treatment in improving the mental health of the participants. During the first follow-up after 1-2 weeks of discharge, the effect of the treatment remained more or less the same. In addition, during the second follow-up assessment the psychological distress level dropped further. This might be due to proper intake of medicines, continued practice of relaxation therapy and abstinence from substances. This also shows that treatment is more effective as the days progress. The Non-ADHD subjects could have made good psycho-socio-physiological adjustments, which reflect in the diminishing scores on GHQ. From Table-3 and Table-4, it is clear that the treatment given is significantly effective for the Non-ADHD group and each outcome scores on the GHQ is different from one another. All the mentioned tests confirm the significance of the outcome. The effectiveness of treatment comes from a blend of right pharmacological and psychological treatment administrations, the patients' positive attitude, willingness to cooperate, and their family's support and help in this effort.

TABLE-5

Psychological Distress level in terms of GHQ scores for ADHD group (n=17)

GHQ Scores	Mean	Standard Deviation
Pre-treatment (Day of Admission)	15.11	4.01
Post-treatment (Day of Discharge)	7.35	2.37
Follow up-1 (1-2 Weeks after discharge)	9.07	2.16
Follow up-2 (3-4 Weeks after discharge)	11.35	4.07

Table-5 and Figure-1 convey that treatment was effective at the time of discharge for the ADHD group. This group, at the time of admission, had their psychological distress level at a high. The treatment, which was the same for both the groups, did have some positive impact in helping overcome de-addiction. It has brought down the distress level slightly lesser than a half of the initial

level, which was a major success. Once the ADHD patients were discharged, their first follow up said it all; the therapeutic effect of the treatment is slowly wearing off notwithstanding the prescription and advice from the de-addiction therapists. The psychological distress level significantly increased from a mean GHQ score of 7.35 to 9.07. This suggests that some thing more needs to be looked into in order to sustain or bring back the positive effect of the treatment. The second follow up was further evidence that treatment was going haywire. The treatment, which has helped in the infirmary, has not helped at home. Possible relapse is imminent. The psychological distress level has further risen to the second highest level out of the four assessments. This confirms that the presence of ADHD endowment and without self-medication this will lead to increased psychological distress. Self-medication theory could be a possible explanation for this occurrence.

TABLE-6

Approximate 'F' for the Pre, Post, Follow up 1 and Follow up 2 of the ADHD group

	Test Name	Value	F
GHQ	Pillai's	0.791	17.67**
	Wilk's	0.209	17.67**
	Hotelling's	3.788	17.67**
	Roy's	3.788	17.67**

* Significant at 0.01 level Hypothesis df = 3.00 Error df=14

TABLE-7

'F' Ratios for the GHQ in the Pre, Post, Follow up 1 and Follow up 2 of the ADHD group

Source of Variation	Sum of Squares	df	Mean Square	F
Sphericity Assumed	541.691	3.000	180.564	22.59**
Greenhouse-Geisser	541.691	1.714	316.104	22.59**
Huynh-feldt	541.691	1.888	285.225	22.59**
Lower-bound	541.691	1.000	541.691	22.59**

** significant at 0.01 level

Comparing the psychological distress level for these two groups (Figure-1), the de-addiction treatment for the Non-ADHD group is effective through out the four stages of assessment which spans anywhere between one to two months period. This positive trend did not sustain after the discharge for the ADHD group. This explains the role of ADHD factor in invalidating the treatment effect. This suggests that the treatment approach should be restructured acknowledging the antecedent of ADHD in substance abuse treatment. The study concludes by asserting that the presence of a history of ADHD is definitely a constraint in substance abuse treatment.

CONCLUSION

ADHD and substance-use disorders may be related in a number of ways (Levin and Kleber, 1995). When the symptoms of ADHD are combined with those of substance-use disorders, it is likely that the severity of both disorders increases (Levin et al., 2002). WURS and PRS had identified a sub-group with history of childhood ADHD among treatment seeking substance abusers who were admitted as in-patients for de-addiction. The ADHD group significantly had earlier onset and higher rate of litigation. Both the groups did not differ significantly in relation to duration and variety of substances tried. The treatment outcome in terms of the psychological distress level, has established that de-addiction regime is more effective for the patients without a history of childhood ADHD than with a childhood ADHD antecedent. This confirms that a history of ADHD is a constraint in treating substance abuse. This calls for an appropriate redesigning of the de-addiction treatment.

Limitations

This study did not consider the present status of the ADHD symptoms among the participants. Parental history was studied neither for substance use nor for ADHD. Except for the history of ADHD, no other comorbid disorders were investigated.

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A STUDY OF FRUSTRATION AMONG RURAL AND URBAN SCHOOL GOING ADOLESCENTS

Shyam Lata Juyal and Nidhi Sharma***

ABSTRACT

Adolescence is the period of storm and stress. This phase of life is very crucial for adolescents as well as for their parents. Their demands are high and they want to enjoy the company of peer groups; when these expectations are not achieved, they feel frustrated and behave in destructive manner. In this way, frustration can be a result of blocking motivational behaviour. Keeping this in view, the present study focused on frustration among adolescents with respect of rural and urban areas. The sample was consisted of 120 school-going adolescents from both areas, (60 rural and 60 urban). Subjects were further divided into two gender groups 30 girls and 30 boys were selected from each group. The selected subjects were tested by administering Nairashya Mappa (Frustration test). The data thus obtained were analysed by using descriptive statistics (t ratio and F test). The result obtained clearly differentiated four modes of frustration – regression, fixation, resignation and aggression. The analysis showed that areas play a significant role in the resignation mode of frustration regarding gender, regression, fixation, aggression and total frustration of rural girls and boys than urban and boys also showed significant difference in respect of both areas on regression, fixation and total frustration than girls.

Keywords: Frustration, Adolescents, Urban, Rural, Gender

Adolescence is the passage from childhood to adulthood. It is surrounded by issues of rebellion, independence, heightened self-consciousness, experimentation, dating, driving, and concerns for the future. Teens and their

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parents share the highs and lows of this often-stormy period, and communication between them is essential to temper the turbulence. This is a challenge for both parents and children, as adolescence, almost by definition, brings parents and children into conflict. The intense emotions and feelings of the teen years are both positive and negative: parents are heroes and villains, best friends and police officers, and the source of great affection and great frustration. The boundaries of the child's independence, which were tested in early childhood are re-tested in adolescence.

In present scenario, every teen is under pressure, and these conflicts and tensions lead to frustration. It is apparent then that frustration, either from within or from without, is a part of daily life from birth to death.

A most influential factor of adolescent development is location. This is true because of that fact much of what shapes an adolescents is the surrounding environment, as the social learning theory would provide. People in a rural area are much more geographically isolated from one another, and the department store, movie theatre and hospital are at a greater distance. The environment is the key, with the resources available to the community greatly contrasted between rural and urban environments. Contextual factors are taken into account and controlled such as combinations of peers and gangs, gender or racial issues, socio-economic status, and parenting styles. These factors collectively account for the overall development of the child, but is split amongst the major division of location – urban or rural. Peers and gang involvement holds different importance in urban regions, while socioeconomic determinants have certain impact on rural families. Gender and racial issues seem to go across locations as biases created towards individuals are consistent in both rural and urban.

The urban environment is generally more well off in monetary concerns due to the job opportunity and increased prosperity of city and suburban business. A reason for acceptance of spendthrift behaviour is that the parents, even if they have money, are not able to give considerable time to children; as a result frustration builds up in an adolescent. In the rural areas, even if less money is involved, the adolescents cannot enjoy liberty from their parents; they are under the control and are not given any money to spend on their amusement and enjoyment as the urban adolescents.

With the advancement of technologies, the rural masses are catching up with the urban; the rural masses now watches satellite television and browse the internet in many areas. These two forms of communication bring forth more exposure of the glamorisation of gang involvement of the urban areas to the rural (Evans, Fitzgerald, Weigel & Chvilicek, 1999). The gender of the adolescent will change roles under rural and urban environment, with an example made from females. Rural families will appreciate a female as a more reserved homemaker, while urban families will expect the female to be as competitive in the business world as the male. Girls perform better in education and job. Faulty

parenting, either knowingly or unknowingly, is also a major cause of frustration of the adolescents.

Frustration can be a result of blocking motivated behaviour. An individual may react in several different ways. He may respond with rational problem-solving methods to overcome the barrier. Failing in this, he may become frustrated and behave irrationally. Another solution to frustration is regressive behaviour – becoming childish or reverting to earlier and more primitive ways of coping with the goal barrier. Throwing temper tantrums, bursting into tears, or sulking are examples of regression. Wearing a long face and a worried look are other signs of this method of dealing with frustration.

Stubborn refusal to respond to new conditions affecting the goal, such as removal or modification of the barrier, sometimes occurs. As pointed out by Brown (1951), severe punishment may cause individuals to continue non-adaptive behaviour blindly:

"Either it may have an effect opposite to that of reward and as such, discourage the repetition of the act, or, by functioning as a frustrating agent, it may lead to fixation and the other symptoms of frustration as well. It follows that punishment is a dangerous tool, since it often has effects which are entirely the opposite of those desired." Flight, or leaving the scene, is another way people have of dealing with their frustrations.

In frustration, a different set of behaviour mechanism is put into operation. Frustration is compulsive in nature. Many of the behavioural problems are basically different modes of frustration mechanism. Frustrations are deeply related to emotions in an atypical way. Responses to frustration have their own classificatory system. They may be classified in terms of rationalisation, withdrawal neurotic depression and normal depression.

Nature of frustrations, based on research findings, was determined. Frustrations included cessation of reward, followed by an emotional reaction, which facilitated interfering responses. Non-reward as an important variable contributing to frustration was also emphasised (Amsel, 1958).

Thus, frustration has its own system and dynamics. Its multi-modal operation speaks the language of the Unconscious. Aggression indicates frustration dynamics at war with hostile situation. Regression and fixation relate to a withdrawing frustration where regression is a condition of fixation. Resignation is the extreme of withdrawal from reality.

Pertaining to the effect of areas, the present study attempts to explore the frustration of adolescents in terms of areas (rural and urban) and gender respectively.

Objectives

1. To assess the effect of area (rural and urban) on frustration of adolescents
2. To compare frustration of adolescent girls and boys in terms of areas

Hypothesis

1. Area (Rural and Urban) will lead to significant differences in frustration of adolescents
2. There would be significant difference in the frustration of adolescent girls and boys
3. The interactive effect of Areas (Rural and Urban) and Gender of adolescents would be significant on frustration of adolescents

METHOD

Sample

A sample of 120 school going adolescents were selected for this study. They were divided into two groups according to areas, that is, 60 rural and 60 urban who were selected from different schools located in Haridwar, Dehradun and Roorkee for urban, and Laksar, Bhagwanpur and Ranipokhri (adjoining to urban) for rural. The selected subjects were bifurcated regarding gender (30 girls and 30 boys) from each group of areas. Age of adolescents ranged from 12 to 17 years, with the mean age of 15.32 years. A personal data sheet was constructed by the researcher to collect information regarding subject's age, residence, number of brothers and sisters and occupation of their father, etc.

Tool

For the purpose of data collection, the test of Frustration constructed and standardised by Chauhan and Tiwari (1999) was administered for the subjects to assess the frustration. It measures frustration on four modes – Regression, Fixation, Resignation and Aggression. The test consists of total 40 items out of which each of the four modes of frustration has 10 items. Each of the item has five answers (multiple choice) graded on five point scale on the positive dimension and a zero point on negative dimension. Operationally defined, all the items on the scale are matters of behavior in daily life. They are thus immensely meaningful and interesting. There is no obscurity or complexity in them.

Statistical Analysis

1. Mean, SD were calculated for the groups.
2. 't' test was carried out for the comparative groups for the four modes of frustration as well as for the total score.
3. 'F' test was calculated for assessing independent and interaction effect of areas and gender of adolescents.

RESULTS AND DISCUSSION

As the present study aimed at studying the significance of difference between rural and urban adolescents regarding gender in their frustration on four modes, the obtained scores were subjected to 't' and 'F' test. The outcome of the analysis are presented in the tables.

TABLE-1

Interaction between areas (urban & rural) and gender (girls & boys) of adolescents (2x2 ANOVA)

Source of Variation	Regression		Fixation		
	Aggression		Total Frustration		
Resignation	MS	F	MS	F	MS
F	MS	F	MS	F	
Area (Urban and rural)	34.12	0.562	6.536	0.156	252.29
3.932*	0.668	0.01	399.61	0.77	
Gender	70.5	1.16	108.29	2.58	64.53
1.00	130.20	2.12	1463	2.83	
Area x Gender of adolescents	307.23	5.06*	403.36	9.63**	9.61
0.149	78.406	1.27	2457.09	4.76*	
Within Group	60.70		41.86		64.16
	61.36		515.75		

*P<.05, *P<.01

TABLE-2

Showing difference in the four modes of frustration, and in the total between areas and gender of adolescents

Variable	Urban (N=30)					Rural (N=30)				
	Girls		Boys		‘t’	Girls		Boys		‘t’
	Mean	S.D	Mean	S.D		Mean	S.D	Mean	S.D	
Regression	30.20	5.62	28.60	5.92	1.08	28.13	10.6	32.80	6.91	2.02*
Fixation	29.20	5.33	27.40	5.18	1.33	25.10	8.82	30.60	5.85	2.84**
Total	107.5	12.8	105.43	12.76	0.62	102.10	19.36	118.13	14.44	3.64***

TABLE-3

Mean, SDs & 't' for girls and boys of urban and rural adolescents

Variable	Girls (N=30)					Boys (N=30)				
	Urban		Rural		‘t’	Urban		Rural		‘t’
	Mean	S.D	Mean	S.D		Mean	S.D	Mean	S.D	
Regression	30.20	5.62	28.13	10.6	0.94	28.60	5.92	32.80	6.91	2.54
Fixation	29.20	5.33	25.10	8.82	2.18*	27.40	5.18	30.60	5.85	2.25*
Total	107.5	12.8	102.10	19.36	1.27	105.43	12.76	118.13	14.44	3.61**

Table-1 shows significant difference between rural and urban adolescents on the mode of resignation frustration ($f=3.932$ $P<0.05$). Mean indicates that rural adolescents are more frustrated in terms of resignation (24.81) as compare to urban boys (21.91). In terms of gender 't' values of rural girls and boys show significant differences on the mode of regression ($t=2.02$, <0.05), fixation ($t=2.84$, <0.01), and total ($t=3.64$, <0.01) frustration. Table-2 results show mean of boys are higher than the girls of rural areas, whereas, no significant

difference found in any mode of frustration and total, between urban girls and boys. It clears that rural boys are suffering greater degree of frustration in comparison to the girls of the same as well as girls and boys of urban group. Table-3 depicts significant difference in regression ($t=2.54$, <0.05), fixation ($t=2.25$, <0.05) and total frustration ($t=3.61$, <0.01) of urban, rural boys, and the mean values of rural boys ($M=32.80$, 30.60 , 118.13) are more on each mode of frustration in comparison to urban boys ($M=28.60$, 27.40 , 105.43). On the other hand, when we compare urban, rural girls we found that there is significant difference exist only in fixation ($t=2.18$, <0.05) mode of frustration while the mean values of urban girls ($M=30.20$, 29.20 , 107.50) are high than the rural girls ($M=28.13$, 25.10 , 102.10).

From the above results, it was inferred that there is a difference in the frustration (resignation mode) of adolescents in the rural areas. The findings of the study revealed that boys belonging to rural areas show more regression, fixation, aggression and total frustration than the girls, whereas, urban girls and boys seems not affected on any mode of frustration. It indicates rural boys want such exposure like urban boys but they are unable to get them because of limitations of the rural environment; as a result, they become frustrated in terms of regression, fixation, aggression mode of frustration. Besides it, boys of both the regions are more aggressive than girls may be there is a negligible difference in the desires and expectations of them. The findings of the present study support by the earlier findings observed by the study of Hines and Saudino (2003), who found that females are not necessarily less aggressive, but that they tend to show their aggression in less overt, less physical ways. Lamb, Puskar, Sereika, Patterson & Kaufmann (2003) also found in their study that trait anger in rural adolescents was higher in boys aged 15-16 as compare to girls aged 16-17. Our result are in line with the results obtained by Paul (1986) who found urban adolescents were more highly oriented to competence, maturity and maintaining harmonious relations; more affectionately disposed to others, with sincerity and tolerance; and strove for the accomplishment of their goal in more mature and competent ways than rural adolescents. Gupta (1977) observed in his study that regression was feminine. In regressive state, urban girls and rural boys show finicky behaviour about food, lack self-control, more escapist, cries easily, more speech defectiveness, excessive day dreamers, exorbitantly ambitious, etc. Symonds (1946) stated that Regression represents a backward step in the development, a returning to older modes of thought, feeling and behaviour, which were of service at an earlier time and are being retried in the hope that some miracle would make them equally serviceable in the present.

The present comparison of and rural participant in respect to gender separately, we found that urban girls show more frustration on fixation mode than the rural girls. Boys belonging to rural areas differ significantly as compared to urban boys on regression, fixation mode of frustration, and on total frustration.

Significant value of the effect of interaction between areas and gender also indicates the difference in the two. Results imply that urban girls have much more desires and expectations but when they feel they are unable to get it due to environment and gender differences, fixation frustration arises in them and it can be seen in their behaviour in terms of repeating over and over again without variations. Maier (1949) observed that this behaviour remains compulsive and does not change even by the punishment. Therefore, the fixated person has a difficulty in forming new attachments, and developing new interests or adaptations. Symonds (1946) said that fixation has been taken as a defense against anxiety by stopping the process of developments.

As a result of interaction (Table 1) between areas (urban and rural) and gender (girls and boys) on regression, fixation and on total frustration while in resignation mode of frustration observed significant difference; whereas, on resignation mode of frustration, significant difference had been found in adolescents belonging to urban and rural areas. It may be the functional ability and social conformity in the high school age that will make the adolescents break away from the dependence on their families and start developing autonomous judgments. Friendships that develop over time are different with the social environments of urban versus rural locations. The adolescent in resigned behaviour possess no plans, no definite relations to future, either no hopes, withdrawal from social contacts, frequent and serious considerations of committing suicide, longing for loneliness, retreatism, returning within one's self lacks interest in surrounding, etc. Frustration is a common emotional response among adolescents related to anger and disappointment, it arises from the perceived resistance to the fulfillment of individual will. The greater the obstruction, and the greater the will, causes more frustration is likely to be in adolescents. Zhang and Fuligni (2006) observed in their study that urban adolescents indicated a greater willingness to disagree openly with their parents; there is a greater intensity of conflict, lower levels of cohesion, and a lower frequency of discussions with their fathers. They were distinct from all other adolescents in terms of several aspects of their family relationships, reporting the earliest expectations for autonomy. If such desires are not fulfilled, they felt frustrated.

Conclusion

Following conclusions can be drawn from the present study:

1. The rural adolescents have high values on resignation mode of frustration than urban adolescents.
2. The rural boys show more regression, fixation, aggression and total frustration as compared to rural girls.
3. The urban girls show high value on fixation mode of frustration than rural girls.

4. Boys of rural areas showed high value on fixation mode of frustration than urban boys.
5. Rural boys show significant difference on regression and on total frustration as compared to urban boys.
6. Hypothesis accepted on regression, fixation and on total frustration in terms of interaction between area and gender of adolescents.

Directions for Further Research: The sample size for the present study was small. Further, this may be conducted on a large sample to arrive at definite conclusions. Further adolescents of rural and urban areas may be compared on some other psychological variables such as adjustment in different areas, self-concept, and self-esteem, and so on.

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A VOYAGE TO TREAT THE THREATS OF PSYCHIATRIC SERVICES AT AMANUEL HOSPITAL ADDIS ABABA, ETHIOPIA

Shimelis Dejene Yegletu and M. V. R. Raju ***

ABSTRACT

The study tried to explore opportunities and challenges for catering psychiatric services at Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia. Relevant literature, legitimate internet and other secondary sources were consulted, and primary information was drawn through interview. Information was pooled from two consecutive surveys conducted between June 2008 and December 2009 as part of the project work for PhD dissertation. Hence, this report provides an analysis of psychiatric services at Amanuel hospital. It covers the severity of challenges, available opportunities, goes beyond what was presented earlier, and brings new ground in a number of areas. Generally, challenges for providing psychiatric services in Ethiopia are pervasive, enduring, and recalcitrant. This implies, activities accomplished so far at all levels were not up to expectations. Unless this situation is reversed, it is bound to have heightened, and multifaceted negative repercussions. The reduction of mental disorders and improvements in psychological well-being should be central policy objectives of the Government of Ethiopia. Achieving this important goal requires many inputs, one of which is information. Effective

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policies and interventions must be based on an understanding of the magnitude of the problem, location, characteristics, challenges and opportunities.

Keywords: A Voyage, Treat, Threats, Psychiatric Services

BACKGROUND

Mental health is the prime of all other health levels whether physical health, social health or whatsoever we may call it. According to Ventevongal, (2006), Russiua, (2007) and Mussema, Kassaye & Amberbeir (2006), mental illness and mental health are determined by multiple and interacting psychological, social conditions, cultural responses, environmental, biological forces, economic factors. Hence, good mental health goes hand in hand with peace, success, and stability. Mental disorders are not simply symptoms of broader social conditions; nevertheless, the less, poverty, lack of security, violence, terrorism, the lack of healthy family relationships during childhood, and trauma or significant losses are crucial factors for mental illness. (Idemudia, 2003; Kramer, Bernstein, & Phares, 2009; WHO, 2005; WHO, 2004; WHO, 2001)

However, cursory inspection of relevant literatures (Yeabsera, 1993; Alem, Desta & Araya, 1995; Mulatu, 1999; Giorgis, 2000) uncovered that lack of information, attribution of mental illnesses to supernatural powers, inadequate services, absence of mental health policy for many developing countries, and risk for stigma and discrimination, etc. were and still are among the major actors behind the drama of mental health challenges the world over. Moreover, for the last many years and even today, much more weight has been given to communicable diseases than mental health issues. This directly and unequivocally violates the civil, political, economic, social, and cultural rights of the mentally disordered.

Mental health is one of the most disadvantaged health care programmes in Ethiopia in all aspects including facilities, structural organization, and trained manpower. According to WHO (2006), the average prevalence of mental disorders in Ethiopia is 15% for adults and 11% for children. With a population in the order of 70 million, that translates to 12.5 million people who would benefit from mental health care. In the past, there was only one facility in the entire country, Amanuel Hospital located in the capital city that provided both inpatient and outpatient psychiatric services for all categories of mental illnesses. Even more unfortunate is that due to lack of organization and funding, treatment at Amanuel is not optimal and often neglectful in providing patient services and resources outside mental health realm.

Today, among the world population, 450 million suffer from mental disorders and the situation is so severe in Africa (WHO, 2006). Even in sub-Saharan Africa where communicable diseases are common, mental disorders account for nearly 10% of the total burden of diseases. A study by Alem et.al, 1995 indicated that around 12% of the (studied population) suffer from mental disorder,

These 2% suffer from severe mental disorders and 10% suffer from milder mental disorders.

Extensive review of relevant findings (Giel, Gezahaegn, & Luuk, 1968; Giel, 1999; Teferi, Aboud & Larson 1991) indicated that major environmental causative factors (natural and man-made) for mental disorders in Ethiopia include frequent wars, displacement (resettlement), drought, famine, disasters, violence of various nature (including sexual violence, physical, and emotional abuse), wrong parenting, unemployment, genetic factors, and poverty. Moreover, malnutrition, chronic illnesses such as HIV/AIDS, political torture, migration, harmful Traditional Practices (HTPs), natural disasters, unstable social situations, overpopulation, wide spread use of drugs 'chat', alcohol, and cannabis have been very common in the country, and have been shaking the stability of the mental states of citizens.

The costs of mental disorders include among others reduced productivity at home and in the workplace. Lost wages, combined with the possibility of catastrophic health care costs, can seriously affect patients and their families' financial situation, creating or worsening poverty. Mental disorders also impose a range of consequences on the course and outcome of co morbid chronic conditions (physical co morbidity), such as cancer, heart disease, diabetes, and HIV/AIDS. Besides, patients with untreated mental disorders are at heightened risk for poor health behaviour, non-compliance with prescribed medical regimens, diminished immune functioning, and unfavourable disease outcomes. Furthermore, mental illness can increase the risk of criminal activity, motor vehicle accidents, child abuse and neglect, divorce, homelessness, domestic violence, and suicide. The stigma and discrimination attached to the mentally disordered people, suffering from the disorder, stress of coping with disturbed people, the lost opportunities in every aspect of life, fear of constant recurrence, squalid living conditions, the economic loss, and legal problems are some of the consequences of behavioural disorders. The problem becomes insurmountable especially for those from the low-income countries who are overwhelmed by the scourges of poverty, war, and diseases of different nature. (Vecchiato, 1993; UNSPECIAL, 2002; Tenaye, Semret & Meskerem, 2010; WHO, 2004; WHO, 2005; WHO, 2001).

Major traditional treatments employed in Ethiopia include wearing amulets, holy water, exorcism by prayer, herbal prescription, and performing rituals and exorcism by fumigation. Psychotropic (Drug) medications that are currently in high use include antipsychotic, antidepressants, anxiolytics, mood stabilizers, and antiepileptic drugs.

Research such as (Shibre, Negash, Kullgren, Kebede, Alem, Fekadu, Fekadu, Medhin, & Jacobsson, 2001; WHO, 2006; Alem & Desta, 1995) examined that owing to the prevailing and pressing problems of malnutrition and other preventable diseases, mental health services are given the least priority in developing world in general and in Ethiopia in particular. Despite some modest achievements, the

situation of mental health services in general and psychiatric services in particular found to be less satisfactory in Ethiopia. Only few clients visit the hospital. Among those who attend the hospital, few are aware of the presence of mental health services in the country.

However, in moving forward, it is important to learn from the past and looking back, it is clear that we can do better in the future. Although some issues have been well studied elsewhere in the world, data about this important problem is very scanty, piecemeal, scattered in Ethiopia. Fundamental issues like the above are yet to be addressed in our case. Hence, unless we manage to pay a tribute, it may undoubtedly orchestrate, reorchestrate these and related challenges. To this end, the paper begins with the first venture for expounding the status quo psychiatric services at Amanuel hospital from the perspective of psychiatric professionals.

Objectives

Identifying opportunities and challenges of providing mental health services is indispensable because scrutinising rewards and predicaments of mental health services as early as possible would perhaps enable optimum utilisation of efforts and minimisation of future challenges. Hence, the main objective of the current study was to examine the advantages and troubles of psychiatric services through the lens of psychiatric professionals; and provide ecologically sound recommendations that help to treat the threats.

METHOD

Context and Sample

This study was conducted in Addis Ababa, the capital city of Ethiopia with over three million populations. Data were collected during February 2010 from purposively selected psychiatric professionals at Amanuel hospital (the only mental hospital in the country, located just nearby one of the biggest markets in Africa, Markato).

Instruments and Data Analysis

In the present study, the interpretive research paradigm has been chosen as it is most suitable for the topic under consideration. As a qualitative research, it aimed to describe and interpret respondents' perceptions, feelings, attitudes and experiences in human terms rather than through quantification and measurement. Hence, it was more concerned with the subjective meanings people attach to their experiences, and recognises the importance of the psychosocial and socio-cultural context in which meaning is created. According to the present study offered an interpretive description of how each participant perceives about psychiatric services through critical and careful scrutiny of participants' reply, and relevant available documents. It helped the current study to

particu
hospita. By researchers use methods, which allow for rich and detailed observations of
of men cases and allowed them to build up an understanding of phenomena through
observing particular instances of the phenomena as they emerge in specific
ast and contexts.

ugh sa Instruments used to obtain information include semi-structured interview
import and document analysis. The researchers were interested in exploring the
issues li opportunities, and challenges for delivering psychiatric services at Amanuel
age to hospital. Hence, using semi-structured interview format allowed the participants
d relat to freely express their perceptions, feelings, attitudes, and experiences. The
xpoundi interview was conducted at their office employing both English and Amharic
pective (Federal language of Ethiopia) languages. After the interview was held, the
conversation was transcribed by the researchers who then identified themes
based on their subjective interpretation of the material.

Stepwise explanation of the interview process includes:

Step 1: Participants were interviewed and tape-recorded.

Step 2: In order to immerse self to the data, and familiarise with it, the
transcribed interviewees were read whilst carefully listening to the tape
recordings.

Step 3: The researchers engaged in a process of carefully reading and
rereading the original transcripts in order to identify patterns and themes,
which were relevant to the research context, namely, the strengths,
weaknesses, opportunities, and challenges or threats, and possible future
directions. During this stage, the investigators engaged in a hermeneutical
process of moving back and forth between the parts of the interview and
the whole interview material and between being involved and being distanced
for the elaboration of themes.

Step 4: Having broken down the information into themes, the researchers
then tried to 'put it all together again'. The researchers achieved this by
adding their interpretation to the themes, which had emerged. An attempt
was made to provide a 'thick' description of each of the participant's
accounts in order to understand each person's perceptions of SWOT of
psychiatric services more fully.

Steps followed during content analysis

In line with the specific research questions, the researchers selected a
sample of documents to analyze. These included newspapers, memoranda,
computer printouts of hospital data, different related findings. These materials
were selected because they were found relevant to address the already stated
research questions in either one way or the other. Next, a category of coding
procedure was developed representing a discrete variable that was relevant to
scrutiny the research objectives under consideration. The mutually exclusive categories
included perceived opportunities, strengths, weaknesses, challenges,

recommendations, etc. Since it is investigators obligation to establish the trustworthiness of all data that is drawn from available documentary sources, relevant documents were subjected to careful examination for their authenticity and validity of the contents. Following this, content analysis was conducted and finally the results were interpreted accordingly.

Keeping an interpretive approach in focus, data were analysed using thematic analysis through the processes of immersing (familiarising self with the material collected till aware of the details and nuances), unpacking (stock-taking activity) where the meanings of the text are unpacked in a way which metaphorically compared to unpacking a suitcase, and associating, 'interpretive material in relation to a broader theoretical, historical, cultural or political framework'.

RESULTS AND DISCUSSIONS

What are the apparent prospects to offer biomedical services at Amanuel mental specialised hospital?

Despite the multitudes of predicaments facing them, interview with key informants and analysis of relevant documents evidenced that probably the most important incentives for providing psychiatric services at Amanuel mental hospital was the presence of weekly meeting called Morning Session. Discussions of this nature are very useful in identifying any problem observed within a week among mental health professionals and finally reach at constructive comments. Moreover, the support given by the security guards (particularly, providing directions for patients), and the existence of runners could further facilitate and speed up the services delivered. Furthermore, the availability of textbook research articles, and other relevant references in the library, the presence of psychiatrists for consultancy while dealing with difficult cases, and the provision of 24-hour service for both free and paid patients were reported to be among the key opportunities in the hospital.

Besides, the delivery of emergency services, provision of education sponsorships, presence of mental health association named O.T.S. 'Amiro Tena Kibkabe' 'Mental Health Care', existence of rehabilitation center for the mentally retarded around Gefersa, inpatient, outpatient, and follow up service and the case team treatment (seeing a client in groups with interdisciplinary approach) have been outlined by interviewee as significant advantages for catering psychiatric services in the hospital. Moreover, participants mentioned that they were fortunate enough to attend various trainings comprising PICT, HMIS, palliative care, PHC, ART, nutrition, infection prevention, HIV and psychiatry, etc.

Although there may be some substance to the above assertions, it is also true that most have to do their work under extremely difficult conditions. Hence, hereafter, time will be taken to discuss on the perceived problems

publishing providing psychiatric services from three perspectives that is, professional, source, client, and administrative related challenges.

What are the supposed main difficulties that perhaps deter supplying biomedical services at Amanuel hospital?

Profession related

The most important difficulty revealed was something relating to the training of clinicians. Because of inadequate trainings, almost all of the clinicians (excluding psychiatrists) were found to be efficient in delivering services up to the standard. One of the key informants (Health Officer) replied:

"Honestly speaking, we did not receive adequate trainings in psychiatry. We took only one course, in two credit hours for 15 days. What exacerbates the above problem most was that the course lacked practical attachment. As a result, we suffered a lot but gained little. On the other hand, we were repeatedly forced to accomplish activities that are even beyond our capacity. For instance, it would be much better if psychiatrists, rather than health officers/clinical nurses, would see psychotic patients; whereas, the reality is quite opposing. Health officers and clinical nurses see almost all patients while psychiatrists became busy with their own personal clinics. Consequently, majority of clients, especially those who are referred from the countryside suffer a lot. 'Same client, same clinician, same diagnosis, same treatment.' – this could be considered as one among the major limitations of case team. All in all, this leads above all to client sufferings and huge wastage of resources."

The other chief trouble portrayed by another interviewee was something related to ethical and corruption issues:

"Some of the mental health professionals join the field of mental health by force than based on their willingness. Concomitantly, majority of them are unhappy and unsympathetic to the services they deliver. Consequently, some of them are often seen inappropriately prescribing drugs free of charge for some clients while they are capable of buying it. As to me, this is something unethical and an extreme sign of partiality never expected to happen in a mental hospital."

As an extension of the above quandary:

"...that some of the mental health professionals usually, inappropriately prescribed extra drugs to patients. They do this with the assumption of 'helping' clients. Among those clients, who happen to be served in such instances, are known to them very well (family members, relatives, friends, same ethnic groups, etc)."

Besides, another key informant reported that treatments of clients often suffer from poor prognostic effects:

"It is well known that Ethiopians are grouped under traditional society. Being part of a traditional society has its advantages and disadvantages. Among the advantages, for instance, both religious and non-religious people try their best in helping the mentally disordered patients. Even if the above traditional ways of treatment have their own side effects, they demand great encouragement and

appreciation, as we cannot afford to provide modern treatments for all patients due to poor mental health services in the country. However, being not 'cognizant' of the above fact, we often see some of our mental health professionals telling patients to stop following or adhering the traditional medical regimen. Consequently, as the conservative culture demands it, majority of customers will promptly decide to quit any further attendance of the hospital, and close their minds to anything associated to the hospital. Concomitantly, they will stop coming in follow up sessions, discontinue taking drugs in the middle, and generally, bring to an end any advice seeking motives. Hence, this unambiguous leads to poor prognostic effects."

Similarly, it is learned from document analysis that there is a great shortage of relevant biomedical equipments. There is only one EEG and one ECT machine currently available in the hospital. There are no additional machines such as X-ray; machines that can measure heart beat, blood pressure, body temperature, breathing systems, etc. Sadly, the ECT is currently out of functioning. Furthermore, the presence of only one expert (capable of operating such equipments) worsens the aforementioned challenges. Generally, there are wide range of problems like shortages of expertise, challenges related to equipments, problems of professional ethics, salaries paid, corruption, trainings, stigma and discrimination, and related others. In our next discussion, we will ponder on highlighting the perceived chief client associated troubles.

Client Related

According to the view of research participants, stigma and discrimination against clients is one among the key predicaments, which in fact goes across the communities whether literate, or illiterate. Result from interview with key informant reads as follows:

"In our country, the society has inadequate knowledge about mental disorders and their treatment. Hence, the larger community often saw deeply stigmatising and discriminating clients. More surprisingly, even other health professionals have negative attitudes towards mental health professionals. Mental health professionals are often ridiculed by their colleagues; often considered as 'mad'. What is worse is, that let alone the community/other biomedical professionals (who lack knowledge about mental health issues), even the mental health professionals who are working in the hospital are often seen heavily stigmatising and discriminating clients. As a result, clients who attend this hospital are often considered as 'persons with no hope for the future', 'good for nothing.'"

Lack of awareness about mental illness or health was repeatedly pronounced as major challenge. Consequently, as explained by another interviewee, for instance, being ignorant of the nature (the meaning/definition; possible causes/sources; available treatment and intervention options) of mental health problems among the community or families are often heard saying:

"My child doesn't like me! My child detests me! My child is arrogant! And similar others. whereas, the client is suffering from some kind of mental illnesses."

Among other major challenges, noncompliance to medical direction was considered as one of the greatest challenges. Discontinuing drugs, taking over under dose, and failure to report in follow up sessions are among the major manifestations of no adherence to medical instructions. Ignorance about the advantages of adherence to medical recommendations; side effects of inappropriately prescribed drugs; and similar others were reported as some of the main explanations behind the drama of noncompliance.

Besides, participants reported that many clients especially those from the rural areas tend to give less weight to modern treatments and rather want to attend the traditional healers (either religious or non-religious). This happens because of misleading socio-cultural or background variables and others related to the nature of traditional healings; they are located within the society, and are more accessible to patients and charge relatively less payments. Besides, they have been dominantly practiced and inherent in the country where attending them is very much supported, enriched, encouraged, and reinforced by the larger community. For instance, since Ethiopians are predominantly a traditional society, religious practices claimed high respect from the larger community. Likewise, traditional healers (especially, religious healers) are often considered more compassionate. Finally, and importantly, even majority of mental health experts believe in traditional causes and treatments of mental disorders.

Up to now, we have been stressing on various obstacles for providing appropriate psychiatric services stemming mainly from the side of clients. Hereafter, we would proceed to discussing other difficulties, particularly administrative related.

Administrative

There were a number of administrative weaknesses reported by the interviewee. However, the following are the major ones. The first limitation cites inadequate training. Almost all of the updating trainings did not provide any certificate, they do not have follow up and monitoring systems, they are based on needs assessment, the hospital set up is not equipped to apply some of the trainings, often limited people join the training while it is necessary for all, high staff turnover (those who got the training often leave the setting and replaced by new comers), and absence of training on themes such as psychosocial and home based care and support. Moreover, participants mentioned that they do not have insurance though they sometime deal with aggressive clients. Besides, absence of transportation services, inappropriate location of the hospital, shortages of funding sources (especially from NGOs), and similar others reported as problems among serious the limiting factors, particularly in preventive, mental health promotion, and advocacy works.

Participants also explained that there is high shortage of clinical assessment instruments. Neurological Examination, EEG, the General Physical Examination,

DSM-IV/ICD-10 diagnostic criteria, clinical interview, clinical observation, and lab tests are the only instruments for regularly employed for clinical assessment. However, there is only one EEG machine, which is not comparable with increasing number of clients. Studies reveal that the developed world is employing another sophisticated assessment instrument called MRI.

Supplementing the above findings, SWOT analysis of relevant documents (including but not limited to BPR, hospital reform module, other documents from personnel office, and hospital data base, empirical findings, books, newspapers, and memorandum came up with what we see in the Box given below.

Box-1: SWOT (Strength, Weakness, Opportunities, and Threats) Analysis of Psychiatric Services at Amanuel Mental Specialised Hospital

Strengths	Weaknesses
Start up of substance abuse ward and inpatient treatments, and start up of inpatient services at emergency sections.	Absence of strong child and elderly treatment, unable to conduct continuous studies, and unable to prepare different projects.
Increased number of outpatient rooms, and development of occupational and recreational room.	Unable to modernise patient food, clothes, washings, unable to be lead by a board, absence of treatment guideline (both drugs and for psychotherapy), and elongated duration of inpatient and outpatient services.
Strengthened unique pharmacy.	Absence of internet services and telephone services for d/t offices, and unable to educate the community about mental health issues.
Opportunities	Threats
Start up of psychiatry education, presence of medical equipments on the market, new strategies on mental health treatment, and high attention towards mental treatment from government.	Negative attitudes towards mental treatment, absence of ratified mental health policy, unattractive salary for staff that does not go in line with skyrocketing prices for everything, expanding substance abuse and traffic accidents, high staff turnover, shortages of required drugs on the market and stock, and budget shortage.
Health service development sector improvement programme, availability of support from stakeholders, and planning of additional service delivery building.	Absence of referral hospital within different regions, poverty and increasing population size, lack of work force, shortage of mental health service in the country, lack of adequate information about mental health among the community, financial shortage, lack

Start up of Psychiatry in MA ting BPR,
start up of psychiatric nurse in BA degree,
motivation from leadership, conducting
BPR, admission and discharge protocol,
and start up of occupational and
recreational services.

Start up unique laboratory and unique
pharmacy, and friendly relationship among
colleagues.

implementation capacity, unable to
arrange, and organizes continuous
research and different projects

The absence of professionally trained
counselors or therapists, in effectiveness
of services delivered by paraprofessionals,
and yawning gap between previous
trainings and mental health service
demands.

Increasing number of patients; absence
of practical attachment courses, and lack
of robust supervision both from the
Universities and Hospitals/internship
sites are few among the many major
challenges.

Nevertheless, we hope that efforts will continue and after a couple more
years substantial recognition and due attention will be gained from the concerned
administrative body and places new demands on resolving the aforementioned
difficulties.

What are the significant effects of the underlined challenges?

The following are summaries of the major effects of the above challenges
as reported by interviewees.

Effects on professionals: Since most of the professionals joined the field of
mental health perhaps not based on their willingness, and since they do not
receive the expected salary, they might become indifferent in delivering services.
Coupled with the above points and related others, there will be reduced work
motivation among clinicians; they possibly lose interest in their job, develop
negative feelings towards their job, perhaps get dissatisfied, and finally shift to
other jobs or shift their field of specialization, and might feel depressed as there
are no solutions for their questions and reduced self-confidence as they are not
able to work efficiently and effectively on what they have been trained.

On the hospital: The quality of service provided in the hospital will reduce
dramatically. As a result, the number of visitors will fall down dramatically. Due
to the mismatch between professionals and patients', some of the jobs might not
be postponed. The community might develop negative attitude towards the
mental services. The hospital crowdedness coupled with heavy traffic makes
very difficult to get back a lost client. High sound pollution in the locality often
creates communication breakdowns between the professionals and the clients.

On the client: During times of drug shortages shifts of drugs will lead to
significant side effect (both physiological and psychological) worsening violations
of the rights of patients. For instance, development of co morbid physiological
diseases such as liver disease, chronic headaches, stomachache heightened

increase or decrease of weights. Moreover, clients might develop mistrust towards the hospital, the clinician, and treatment, enlarged reluctance or else may stop further interest to visit the hospital for a second time, increased interest to shift to either religious or non-religious traditional healers, clients' might show reduced interest or perhaps quit to buy drugs including those appropriately prescribed, become afraid of added stigma and discrimination; increased nag between the client and clinicians, and being not satisfied with the services, clients' might develop feelings of 'I am not going to be cured'.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

From the study, it appears that the challenges for providing psychiatric services in Ethiopia are pervasive, enduring, and recalcitrant. This implies, activities accomplished so far at all levels, were not up to expectations.

Recommendations

The findings of the current study showed that challenges for delivering 'proper' psychiatric services in Amanuel hospital mainly fall in two categories. The first is related to ignorance at all levels and the second investment. The reality is that mental illness continues to be stigmatised in Ethiopia. While people with physical illness are usually treated with solicitude and concern, persons with mental illness are frequently the objects of ridicule, contempt, or fear. Hence, awareness raising campaign (on what mental illness is, possible sources, and available treatment options, etc) should be conducted in different parts of the country particularly in rural areas.

Furthermore, clinicians (especially health officers, psychiatric nurses, clinical nurses, and general practitioners) operating at the hospital should be given intensive updating trainings on various relevant topics. Moreover, it would be better if hospital management training were given for CEO and other line managers. Doing this perhaps boost the efficiency and effectiveness of psychiatric services in the hospital. Finally, it is the contention of the current investigator that absence of policy on mental health has contributed significantly the current level of mental health services. Hence, the time is now ripe, more than ever to successfully accomplish policy issues first and thereby boost mental health services in the country.

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POSITIVE HEALTH CONSEQUENCES AMONG EMPLOYED AND UNEMPLOYED WOMEN: SELF-EFFICACY AND PERFECTIONISM

Gagandeep Kaur*

ABSTRACT

Employment has become increasingly significant in the lives of women. The pertinent questions that arise: Is a woman healthier and better adjusted by relinquishing the traditional role or by combining the two roles? Self-efficacy and perfectionism were selected to evaluate the effect of employment on women in this study. The samples consisted of 100 married employed and 100 married unemployed women in the age range of 25-41 years, with educational qualification of 10+2 and above and having at least one school-going child. The General Self-Efficacy Scale and the Multidimensional Perfectionism Scale was chosen for collection of data. SPSS version 13.0 was used for analyzing data. Professionally employed women were found to be significantly higher on self-efficacy and adaptive perfectionism than unemployed were and non-professionally employed women. It is concluded that the status and level of works are important factors for creating the positive health consequences among women.

Keywords: Women, Work, Self-efficacy, Perfectionism

Does paid employment increase a woman's risk for physical and mental health problems, or does paid employment improve a woman's health? On one hand, some women are exposed to physical, chemical, and biological hazards on the job and may also suffer strain and exhaustion due to job stress and overload. On the other hand, employment generally results in increased income and better access to health care, which should benefit women's health. Being an employee

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Flammer (1990) found that individuals with high self-efficacy beliefs also report strong feelings of well-being and high self-esteem in general. Thus, it could be said that high self-efficacy promotes women's health in general. High self-efficacy has also been associated with adaptive perfectionism (LoCicero & Ashby, 2000).

Perfectionism, in essence, is a difficult construct to define (Flett & Hewitt, 2002). Variety in descriptors of perfectionism is attributed to different conceptualisations as understood by various researchers (Dunkley, Blankstein, Masheb, & Grilo, 2006; Flett & Hewitt, 2002; Shafran & Mansell, 2001), and subject to the instruments used for measurement and assessment (Campbell & DiPaula, 2002).

In simple terms, perfectionism can be defined as a personality style manifested in an individual's strive for flawlessness (Flett & Hewitt, 2002; Hewitt Flett, Besser, Sherry, & McGee, 2003) as highlighted by a tendency to establish excessively high personal standards (Alden, Ryder, & Mellings, 2002). In setting high standards, perfectionists leave themselves with little latitude for making mistakes, and are left feeling tasks are never completed well enough (Einstein, Lovibond, & Gaston, 2000). They are preoccupied with self-appraisal and are prone to self-criticism of others (Alden et al., 2002). Hamachek (1978) distinguished between normal perfectionists and neurotic perfectionists, both types who hold high standards for themselves but differ in their focus and approach to tasks.

Perfectionism is generally conceptualised as a multidimensional construct (Alden et al., 2002; Einstein et al., 2000). As reflected in the recent development of perfectionism measurement scales, the multidimensional models incorporate both personal and social components (Flett & Hewitt, 2005; Frost & DiBartolo, 2002; Lundh, 2004). Hewitt and Flett (1991) and Frost, Marten, Lahart and Rosenblate (1990) demonstrate the conceptualisation of multidimensional models through the development of their independent measures, both labelled Multidimensional Perfectionism Scale (MPS).

Hewitt and Flett's (1991) model of perfectionism identified three dimensions: self-oriented perfectionism, socially prescribed perfectionism and other-oriented perfectionism (Hewitt, et al., 2003). Self-orientated perfectionism relates to perfectionist demands towards the self (Lundh, 2004) thus, the need for the self to be perfect. Socially prescribed perfectionism involves the perceived need to attain standards and expectations as prescribed by significant others (Hewitt & Flett, 1991). The third Dimension, other-oriented perfectionism, relates to beliefs and expectations about others (Hewitt, Flett, & Ediger, 1996). Parallel research by Frost and associates (Frost et al., 1990; Frost & Marten, 1990) has resulted in the development of another multidimensional measure of perfectionism. Although the Frost scale does not provide an assessment of other-oriented perfectionism, it does provide subscale measures of both the personal aspects of

perfectionism (i.e., high standards, concern with mistakes, doubts about actions, organization) as well as the social pressures believed to produce perfectionism (i.e., high parental expectations, parental criticism).

Further, scores on the FMPS have been used in a number of cluster analytic studies of perfectionism in which support has been found for such typology. Rice and Dellwo (2002) reported that the healthy cluster obtained the highest scores on PS and O subscales and the unhealthy cluster generally scored highest on the CM, D, PE and PC subscales. It encompasses some dimensions of perfectionism that are related to negative assessment of action, being too preoccupied with mistakes and self-reproach for those mistakes. This dimension of perfectionism is positively correlated with indices of mental illness like depression, stress and anxiety (Beiling, Israeli, Smith, & Antony, 2003). Blankenstein, Flett, Hewitt, & Eng (1993) found out that both dimensions of perfectionism have correlation with some sorts of fears like; fear of functional assessment, fear of defeat and fear of making mistake. Antecedent studies also showed that perfectionism has relationship with insufficient relationships and cooperation (Epstein and Eidelson, 1982). This is also suggested that setting up high standards for functions make persons hesitated for showing their successes (Schlenker and Leary, 1985). These researchers noted that such persons are socially anxious and then they feel uncomfortable to embark on humanitarian behaviours.

Maladaptive perfectionism can cause much stress, which in turn leads to poor mental and physical health. Page, Bruch, & Haase, (2008) with an emphasis on importance of personality in vocational adjustment showed that in comparison between 5 factors of personality, perfectionism predicts higher variance of doubt or career indecision. It was revealed in this study that self-critical inclinations, which are being evaluated by negative perfectionism, contribute to understand the role of personality in job selection. In addition, a set of high personal standards that are assessed by positive perfectionism seems that has relationship with high vocational self-efficacy. Miller (1996) concluded that perception of social level and place have relationship with perfectionism. As perfectionist persons evaluate their social level lower than real and they try continuously to achieve higher rank and class in the society. Whereas, in our society having a career can be realized as a higher social rank, then the second major point in our study is that whether working women and housekeepers are different in perfectionism or not.

Many researchers over the years have made comparative studies of employed and unemployed women on various psychological variables. There have been contradictory results. Moreover, there is dearth of such studies on Indian population. Most of the studies have been done outside India, from which it is difficult to generalize for Indian population. It is therefore doubtful if the replication of such studies done abroad will yield similar results in India, with different

social, cultural and political set-up. Therefore, there is a need of such a study in the Indian set-up and culture. The following **hypotheses** were verified:

- (1) Self-efficacy would be positively related to adaptive perfectionism and negatively related to maladaptive perfectionism.
- (2) Employed women would be significantly higher on self-efficacy and adaptive perfectionism and lower on maladaptive perfectionism than unemployed women.
- (3) Professionally employed women would be significantly higher on self-efficacy and adaptive perfectionism and lower on maladaptive perfectionism than non-professionally employed women.

Sample

A stratified convenience sampling technique was used for the selection of the sample. The sample consisted of 100 employed women (65 professional and 35 non-professionally employed women), and 100 unemployed women (divorcees, widows or women living apart from the husbands were not included in the study). They were in the age range of 25-41 years belonging to lower, middle, and upper socio-economic status groups, with educational qualification of 10+2 and above and having at least one school-going child. Sample of 100 married employed women with the above-mentioned demographic characteristics were drawn from various organizations in Northern India. In the sample of employed women, 65 professional women, that is, doctors, teachers, lawyers, and 35 non-professionally employed women, that is, clerks working in banks, offices, and secretaries employed in different organisations were selected. Following were the inclusion criteria for selection of unemployed women of the sample:

- (i) Those who had never taken up a job before or after marriage
- (ii) Those who did not plan to take up a job in the near future
- (iii) Those who were not engaged in any kind of part-time or full-time independent business or helping in the family business

Tools

General self-efficacy (GSE): The SGSES (Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, & Rogers, 1982) is a Likert format 17-item scale. The response format is a 5-point scale (1 = strongly disagree, 5 = strongly agree). Sum of item scores reflects general self-efficacy. The higher the total score is, the more self-efficacious the respondent. Sherer et al. developed the GSE scale to measure 'a general set of expectations that the individual carries into new situations'. In two of their studies using samples of university students and managers, Chen et al. reported high internal consistency reliability for SGSES (0.88 to 0.91 respectively).

Frost Multidimensional Perfectionism Scale (MPS-F): The MPS-F (Frost et al, 1990) is a 35 item self-report measure of perfectionism that has been used

extensively to measure perfectionism in both non-clinical and clinical samples. The MPS-F has 6 sub-scales: 1) concern over mistakes, 2) personal standards, 3) parental expectations, 4) parental criticism, 5) doubt about actions and 6) organisation. The questionnaire is answered on a five point scale with a range from 35-145. Higher scores indicate a higher degree of perfectionism. The internal consistency of the overall scale is also very good ($\alpha = 0.9$). (Frost et al, 1990).

RESULTS AND DISCUSSION

In the light of stated hypotheses correlation coefficients, means, standard deviations, and 't-test' were computed to analyse the obtained data in the present investigation. Table I shows the correlation between self-efficacy and measures of perfectionism.

TABLE-1

Showing correlation between Self-Efficacy and dimensions of Perfectionism

		Self-Efficacy
Maladaptive Perfectionism	Parental Expectations	-0.32**
	Parental Criticism	-0.30**
	Concern Over Mistakes	-0.28**
	Doubt About Actions	-0.24*
Adaptive Perfectionism	Personal Standards	0.27**
	Organisation	0.35**

*Significant at .05 level; ** Significant at 0.01 level.

The first hypothesis is tested based on correlation analysis (Table I) as hypothesized that self-efficacy would be positively related to adaptive perfectionism and negatively related to maladaptive perfectionism. The results revealed that the relationship between self-efficacy and dimensions of maladaptive perfectionism is significantly negatively correlated with the calculated r values as: -0.32, -0.30, -0.28 (significant at 0.01 level) and -0.24 (significant at 0.05 level) for parental expectations, parental criticism, concern over mistakes and doubt about actions respectively. In addition, the relationship between self-efficacy and dimensions of adaptive perfectionism is significantly high with the correlated r -values as 0.27 and 0.35 (significant at 0.01 levels) for personal standards and organization. The results support our first hypothesis. It means that women, who have high self-efficacy, that is, possess self-beliefs about their capabilities to produce designated levels of performance, are high on adaptive perfectionism and low on maladaptive perfectionism. Those who suffer from maladaptive perfectionism tend to be very self-critical when they evaluate their performance or achievements. They tend to engage in 'all or none' thinking when evaluating their performance, such as perceiving their work performance as either a total success or a complete failure, coupled with a strong tendency to minimise their accomplishments and magnify any mistake or shortcoming.

these errors/distortions in thoughts and beliefs, in turn, lead to increased self-criticism and perception of failure, thus, lowering the person's self-esteem, and potentially leading to decreased performance or unhealthy behavioural practices.

TABLE -2

Mean, SD and t-value of Perfectionism and Self-Efficacy between Employed and Unemployed Women

		Employed Women		Unemployed Women		t-value
		Mean	SD	Mean	SD	
Maladaptive Perfectionism	Parental Expectations	17.95	3.64	20.59	3.04	5.56**
	Parental Criticism	10.89	3.12	12.39	2.47	3.77**
	Concern Over Mistakes	24.35	6.22	29.75	5.44	6.53**
	Doubt About Actions	12.70	2.86	13.09	2.73	2.05*
	Personal Standards	24.27	4.31	21.27	3.82	5.20**
Adaptive Perfectionism	Organisation	23.24	4.00	20.03	3.92	5.72**
	Self-Efficacy	57.54	5.76	21.27	4.23	6.69**

0.27** Significant at 0.05 level; ** Significant at 0.01 level.

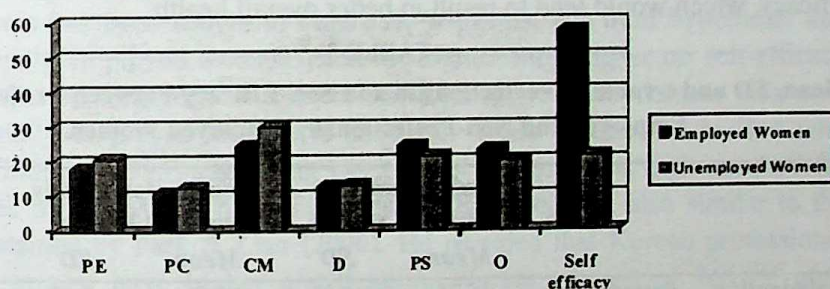


Figure-1: Showing mean values of Employed and Unemployed Women on Perfectionism and Self-Efficacy

Table 2 indicates significant difference between employed and unemployed women on the dimensions of maladaptive perfectionism; the results revealed that there is significant differences between the studied two groups on parental expectations ($t = 5.56$, $p < 0.01$), parental criticism ($t = 3.77$, $p < 0.01$), concern over mistakes ($t = 6.53$, $p < 0.01$) and doubt about actions ($t = 2.05$, $p < 0.05$). The unusual of the means shows that unemployed women are found to be higher on maladaptive perfectionism than employed women on all of these four dimensions. With regard to adaptive perfectionism, significant difference is found between two groups on personal standards ($t = 5.20$, $p < 0.01$) and organisation ($t = 5.72$, $p < 0.01$). The employed women are also found to be significantly high on self-efficacy ($t = 6.69$, $p < 0.01$).

efficacy ($t = 6.69, p < 0.01$). Thus, we can say that employed women are significantly higher on self-efficacy and adaptive perfectionism and lower maladaptive perfectionism than unemployed women. The same trend can be seen in Figure 1. These results confirm our second hypothesis and are consistent with findings of Page et al. (2008), who discovered that self-critical inclination presented in negative perfectionism, play role in the doubt about vocational decision-making and job selection. Doubt about job selection and resignation from job due to fear of making mistake and being criticised suspect the persons more to unemployment.

The present findings are also in consonance with the findings of Messinger, Im, Page, Regev, Spiers, Yoder, & Meleis (1997). According to them, occupying multiple roles is thought to increase the women's chances to learn, to develop self-efficacy, to build social network and open access to information instrumental and emotional support, and to buffer life's stresses and strains. Playing multiple roles also provides cognitive cushioning and alternative sources of self-esteem and gratification when things go poorly in one's life domains. Several studies reported higher psychological well-being among employed women in comparison to unemployed women (e.g., Walker and Walker, 1980; Flamm, 1990; Ozer, 1995; Martire, Stephens, Townsend, 2000; Rao, Apte, Subbakrishna, 2003). Based on our results, we could say that employed women report higher adaptive perfectionism and are more likely to have greater self-efficacy, which would tend to result in better overall health.

TABLE-3

Mean, SD and t-value of Perfectionism and Self-Efficacy between Professionally Employed and Non-Professionally Employed Women.

		Professionally Employed Women		Non-Professionally Employed Women		t-value
		Mean	SD	Mean	SD	
Maladaptive Perfectionism	Parental Expectations	16.35	3.28	20.91	2.07	8.47*
	Parental Criticism	9.84	2.92	12.82	2.51	5.34*
	Concern Over Mistakes	21.95	5.14	28.80	5.62	5.97*
	Doubt About Actions	11.84	2.25	13.11	3.32	2.06*
Adaptive Perfectionism	Personal Standards	26.21	3.46	20.65	3.31	7.87*
	Organization	24.93	3.12	20.08	3.55	6.79*
Self Efficacy	Self Efficacy	60.31	4.44	52.40	4.23	8.77*

*Significant at 0.05 level; ** Significant at 0.01 level.

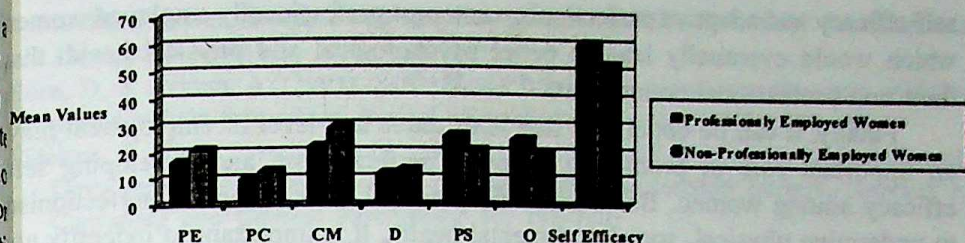


Figure-2: Showing mean values of professionally Employed and Non-Professionally Employed Women on Perfectionism and Self-Efficacy

The glance at the results in Table III showed significant difference between professionally employed women and non-professionally employed women on dimensions of maladaptive perfectionism. There is significant difference between two groups on parental expectations ($t= 8.47, p<0.01$), parental criticism ($t= 5.34, p<0.01$), concern over mistakes ($t= 5.97, p<0.01$) and doubt about actions ($t= -2.06, p<0.05$). The means show the non-professionally employed women scored higher on maladaptive perfectionism, whereas, professionally employed women are found to be higher on adaptive perfectionism dimensions. Significant difference are found between the studied two groups on personal standards ($t= 7.87, p<0.01$) and organisation ($t=6.79, p<0.01$). Regarding the variable self-efficacy, professionally employed women are significantly higher than non-professionally employed women ($t=8.77, p<0.01$). Graphical representation of mean scores has been shown in Figure II. With this, our third hypothesis that professionally employed women would be significantly higher on self-efficacy and adaptive perfectionism and lower on maladaptive perfectionism than non-professionally employed women is accepted. These results are in line with Miller's findings (1996) suggesting that people who establish high standard for themselves try to reach a high social class. This finding is also similar to the results obtained by Park & Liao (2000). He revealed that Korean professional working women have higher gratification. Worker women or having non-professional career had less support from husband, and did not have any person for helping them and had to work long hours daily and had less efficacy. Park & Liao (2000) stated that these professional women enjoyed more in their job and had feeling of worthiness.

A plausible reason for higher self-efficacy and adaptive perfectionism amongst professionally employed women than non-professionally employed women is that, there are a variety of environmental and social factors which have been proposed as mediators of the relationship between employment and self-efficacy and employment and adaptive perfectionism. For instance, professionally employed women are higher on social status and have better support from society and less discrimination at work place (Chaudhry, 1995) and they have better work facilities than non-professionally employed women do. This can ensure better

self-efficacy and adaptive perfectionism amongst professionally employed women which would eventually lead to better psychological and physical health than their non-professional counterparts.

Finally, it can be concluded that both status and level of employment play an important role in promoting adaptive perfectionism and developing self-efficacy among women. Because of the potential of maladaptive perfectionism to undermine physical, social and mental health, it is important to identify and understand the characteristics (such as low self-efficacy) that put women's health at risk, so that appropriate treatment programs could be developed. The benefits and liabilities of women's employment and unemployment are pressing public health issues now and for the near future.

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IMPACT OF PERCEIVED STRESS AND LOCUS OF CONTROL ON CONFLICT RESOLUTION STYLES

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ABSTRACT

Modern life is full of hassles, deadlines, frustrations, and demands. These stressful challenges not only pose a threat to one's ability but also their cumulative effects lead to physical, emotional and mental breakdown. Stress is the body's automatic response to any physical or mental demand placed on it. It may turn someone on (eustress), or may wear someone out (distress). Infact life without stress is death. Stress may have positive and negative effects. Perception is basically a common source of stress i.e. how one perceives the situation. The locus of control governs the person's decision making ability which may be governed by him(Internal locus) or influenced by others (External Loci).The present study examined the impact of perceived stress and locus of control on conflict resolution styles. The study was carried out on 300 adolescents with a mean age of 15-18yrs. The results indicated more perceived stress, agitation and anxious behavior in girls as compared to their male counterparts. Avoiding coping styles showed a positive correlation with the level of stress. External locus of control also showed a positive correlation with high level of perceived stress.

Keywords: Health and performance, Organisational Structures and Organizational goals.

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The word stress is derived from the Latin term "Stringers" which means "to draw tight". Some define stress as the non-specific response of the body to any demands made on it. When the demands on an individual exceed his capability and adjustment resources stress occurs. All situations positive and negative that require adjustment can be stressful. Neufeld (1990) has pointed out that "stress is a by product of poor or inadequate coping".

There are various definitions of stress, and this is further complicated because we all intuitively understand what stress is— although different people feel stress very differently. The most commonly accepted definition (mainly attributed to Lazarus) is that "Stress is experienced when a person perceives that demands exceed the personal and social resources that the individual is able to mobilize".

Stress is different from anxiety which is a state of uncertainty. It is also different from agitation which is the physical part of anxiety. Stress also differs from frustration which is blocked goal attainment. Stress is a pressure condition causing hardship; it is an internal phenomenon and a mental attitude. If stress is an imbalance in the environment, the result is implantable. Stress is generally believed to have a deleterious effect on health and performance. But a minimum level of stress is necessary for effective functioning and peak performance. The common symptoms of stress can be physical, mental, emotional or behavioral:

Physical: tiredness, headache, difficulty in sleeping, muscle aches, chest pain, stomach cramps, nausea, trembling, feeling cold, flushing or sweating and frequent colds.

Mental: difficulty in concentrating, poor memory, confusion, and loss of sense of humor.

Emotional: anxiety, nervousness, depression, anger, frustration, worry, fear, irritability, impatience, or short temper.

Behavioural: pacing, fidgeting, increased eating, smoking, drinking, crying or yelling.

LOCUS OF CONTROL

Locus of control is a concept in psychology, originally developed by Rotter in 1950s. The core of his approach is called Expectancy Value Theory. The two 'loci', as established by the theory, are the internal and external loci. The locus of control represents how a person's decision making ability is influenced. Essentially, those who make choices primarily on their own are considered to have internal loci, while those who make decisions based more on what others desire are said to have external loci. People with external loci are generally more apt to be stressed and suffer from depression as they are more aware of work situations and life strains. A more internal locus of control is generally seen as desirable. Having an Internal locus of control can also be referred to as "personal control".

Internal vs. External

In simplistic terms, a more internal locus of control is generally seen as desirable. Having an Internal locus of control can also be referred to as "self-agency", "personal control", "self-determination", etc. Research has found the following trends:

- Males tend to be more internal than females
- As people get older they tend to become more internal
- People higher up in organizational structures tend to be more internal (Mamlin, Harris, & Case, 2001)

However, it is important to warn people against lapsing in the naive notion that internal LOC is good and external LOC is bad (two legs good, four legs bad). There are important subtleties and other factors involved. For example, if one has internal orientation it usually needs to be matched by skills and competence so that the person is able to act successfully on their sense of personal responsibility. Overly internal people who lack confidence and efficacy in their abilities can become neurotic, anxious and depressed. On the other hand, there are many people with an external orientation who lead easy-going, relaxed, happy lives.

Conflict

A dictionary gives the following semantic range for the word *conflict*: Conflict *n.* (Konflikt) i. A struggle between opposing forces; battle. ii. Opposition between ideas, interests, controversy. iii. Psychological opposition between two simultaneous, incompatible wishes or impulses, sometimes leading to emotional tension. iv. To come into opposition; clash. v. To fight. Struggle battle tension are words the Collins English Dictionary uses to define conflict.

Conflict is an important concept in modern management. Most psychology books suggest that conflicts come from two tendencies: approach and avoidance. To *approach* is to have a tendency to do something or to move in a direction that will be pleasurable and satisfying. To *avoid* is to resist doing something, perhaps because it will not be pleasurable or satisfying. These two categories produce three kinds of conflicts:

1. Approach-Approach Conflict - this is due to the pursuit of desirable but incompatible goals.
2. Approach-Avoidance Conflict - here is a desire both to do something and not to do it.
3. Avoidance-Avoidance Conflict - here there are two alternatives, both of which may be unpleasant.

Studies in past shows that people with an external locus of control think that reinforcements are a function of fate, luck, or powerful others (Rotter, 1954). Believing they have no control over the environment, externals are reported

to be inactive, have low self-esteem, and not trusting of others (Silvestre Anderson-Gough & Anderson, 2002; Loosemore & Lam, 2004). These people also feel generally incompetent, passive, skeptical, and dogmatic, and as a result they have higher levels of anxiety, stress, and depression (Ybrandt 2008; Baydoğru & Dağ, 2008).

Cox and Karanika-Murray et al (2009) showed that gender was an interesting individual-difference variable because, whether for social or biological reasons, it appears to interact with many other factors and there are significant differences between men and women in health-related work stress outcomes. For example, there is a persistent trend in organizational stress research that females are significantly more likely than males to suffer from depression.

Hamarat, Matheny, Curlette, Aysan, Harrington, Gfroerer & Thompson (2000) reported that perceived stress level predicts life satisfaction among American college students. Interestingly, they found that for middle aged and older adults combining a measure of perceived stress with a measure of coping resource effectiveness provided a better predictor of life satisfaction than did perceived stress alone. For younger adults perceived stress alone was the best predictor of life satisfaction. While investigations of life satisfaction among college students have been conducted in other cultures (Lange and Byrd, 1998), previous studies have not tested the ability of coping resource level and its effectiveness and perceived stress to predict college student's subjective well being, or satisfaction with life as did Hamarat, Thompson, Zabucki, Steel, Matheny & Aysan (2001). Using the same measure Hamarat, et al (2000) assessed this relationship in north Americans across three age groups, one of which one group was college students. The focus of their research was on coping with stress and life satisfaction among Turkish college students. Both separate and joint affects of perceived stress and coping resource availability upon life satisfaction were examined. It was hypothesized that the combination of coping resources availability and perceived stress would be better predictors of life satisfaction than either of the two. Researches have found that women react to stress differently than men. They reviewed numerous studies and developed a broad model of how women deal with stressors in their life. When women are confronted with stressors, be it a predator or a bad day at office, they tend to respond by turning to their children and providing caring as well as seeking out contact and support from them. The support they seek was usually from other women. This "tend and befriend" behavior has been tentatively linked with the hormone oxytocin, which is released by the body during stress. It has been shown to make both rats and humans calmer, less fearful, and more social. While men also secrete oxytocin, male hormones reduce the effect of oxytocin in their bodies. Female hormones on the other researches have found that women react to stress differently than men.

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Dongyoung and Leckenby (2001) examined the socio-psychological factor of locus of control in relation to perceived interactivity on the internet. To this point in the study of this new medium and concept of interactivity, most social science research has studied the psychological dimension of the individual's relation to the Internet. This research focused on the individual's relation to group experience in relation to perceptions of the Internet through use of the locus of control concept. Results of the study of 121 individuals recruited online and who completed an online questionnaire showed that perceived interactivity of the Internet can be partially explained by the locus of control variable.

Those internal in their orientation to the world tend to view the Internet as more interactive than those external in their orientation. Implications for theory and practice are provided. The current study examined the relationships between Internet usage and the social contexts to which people belong. Using locus of control and the influences of social contexts on Internet usage behavior, the perceived interactivity of the web, the perceived reliability of commercial information from Internet advertising, and attitude toward Internet advertising in general were studied. The association between stress and disease is not a new one. In fact, this relationship has been held to be intuitively true for ages. But medical science does not take kindly to the use of intuition as a means of gaining knowledge. However, some health professionals are convinced of an intangible link between stress and disease. The seeds of clinical understanding were first planted by observations made by Selye, giving rise to general adaptation syndrome. In, 1977 Pelletier estimated in his book, *Mind as healer, Mind as slayer* that between 50 and 70% of all disease and illness is stress related. By 1992, estimated were even higher, indicating that between 70 and 80% of health related problems are either precipitated or aggravated by stress. The list of such disorders is nearly endless, ranging from common cold to cancer.

The objective behind this research study was to study the impact of perceived stress on various conflict resolution styles and to study the impact of locus of control on various conflict resolution styles.

METHOD

Sample: The present study was carried over on a sample of 300 adolescents (age range 15-18 years) consisting of 150 boys and 150 girls. The sample was taken from various schools of Hisar district.

Tools:

Perceived Stress Scale by Cohen, Kamarck and Mermelstein (1983). It measures the degree to which one's life situations and circumstances are perceived as stressful. This appraisal-based measure of stress was selected because current status of assessment researchers tends to favor such measures over checklist

assessments. The PSS has strong psychometrics with coefficient alpha reliability ranging between 0.84 to 0.86.

Rotter's LOC Scale (1966): It is a generalized measure of internal vs external LOC and it continues to be widely used to assess perceived control in several organizational and health related researches. It's a 29-item scale. All the items are forced choice items and the subject will have to choose only one item from the alternatives provided in each item. One choice represents an internal locus of control orientation while the other represents an external locus of control orientation. There are 23 items in the scale designed to measure the LOC expectancies and 6 are filler items. Satisfactory test-retest coefficients have been reported by Rotter (1966).

Conflict Handling Mode Instrument (TKI) (1973) by Kilmann and Thomas. The TKI is designed to assess an individual's behavior in conflict situations i.e. situations where the concerns of two people appear to be the incompatible. This instrument contains 30 items. In such situations, we can describe a person's behavior along two basic dimensions:

Assertiveness: the extent to which the individual attempts to satisfy his or her own concerns.

Cooperativeness: the extent to which the individual attempts to satisfy the other person's concerns. These two basic dimensions can be used to define specific methods of dealing with conflicts. These five basic "conflict handling modes" are shown below:

Competing: This is an assertive and uncooperative - a power oriented mode. Competing might mean standing up for your rights, defending a position you believe is correct, or simply trying to win.

Accommodating: This is assertive and cooperative, the opposite of competing. When accommodating, an individual neglects his own concerns to satisfy the concerns of the other person; there is an element of self-sacrifice in this mode.

Avoiding: This is an unassertive and uncooperative style. When avoiding, an individual does not immediately neglects his or her own concerns to those of the other person.

Collaborating: It is both assertive and cooperative the opposite of avoiding. When collaborating, an individual attempts to work with the person to find an alternative that meet both sets of concern.

Compromising: This is intermediate in both assertiveness and cooperativeness. When compromising, the objective is to find an expedient, mutually acceptable solution that partially satisfies both parties.

Procedure

First of all school principal were contacted and informed about the importance and the purpose of the study were communicated, to get the approval of the school administration for the data collection. After grant of approval, days were

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fixed for data collection. During the actual data collection, proper information regarding filling the questionnaire was given to students and their willingness was obtained to participate in the study. They were told that they had to give their true response and their identity would be kept confidential.

Statistical Analysis

Statistical Package for Social Sciences for Windows Version 11.1 was used in this study. Descriptive statistics, Pearson product moment correlation and One-way ANOVA were applied as per basic assumptions.

RESULTS

The means of the scores obtained by the respondents on perceived stress, Locus of control and conflict management style were computed for the entire sample as well as separately for boys and girls. From Table 1, it can be seen that perceived stress of the whole sample comes out to be 20.84, while the mean perceived stress score amongst girls was 21.37, whereas for boys, the mean score was 20.30. The results indicated that the boys had lower levels of perceived stress in their life as compared to girls. This implied that the boys viewed their life in a positive light whereas the girls view it in a negative light. The girls showed more agitated anxious and anticipating behavior as compared to boys.

TABLE 1

Mean Scores on Perceived Stress, LOC and Conflict Resolution Styles

<i>Variables</i>	<i>Boys</i>	<i>Girls</i>	<i>Total (B+G)</i>
Perceived Stress	20.30	21.37	20.84
Locus of Control	6.62	8.12	7.37
Competing	5.53	5.75	5.66
Accommodating	5.68	5.74	5.71
Avoiding	5.72	5.48	5.60
Collaborating	6.68	6.44	6.54
Compromising	6.28	6.38	6.33

Correlation of PSS with LOC, Competing style, Accommodating style, Avoiding style, Collaborating style and Compromising style were not significant. Only the correlation between PSS and avoiding style was significant at 0.01 level. The correlations of LOC with competing style, accommodating style, avoiding style, collaborating style and compromising style were also not significant. Also none of the correlations between the Conflict Resolution Styles were significant indicating that the styles were mutually independent.

This implies that if the person tends to adopt an avoiding coping style, he is likely to have higher levels of stress, as it has been held since ages that the best way to solve a problem is to confront it directly. So, in a way avoiding the

stressful situation or the conflict causes stress in the individual. LOC however does not appear to be related to perceived stress or coping style.

DISCUSSION

Rushali (1990) conducted a research on the stress events and coping strategies of Turkish adolescents and young adults. Gender and type of school (secular and non secular) were also considered. Subjects were 1032 students taken from two high schools and a university in Ankara. Ages of subject varied between 10 and 25. Subjects described the most stressful event of the last 6 months and responded to the items of the ways of coping inventory (Folkman and Lazarus, 1980) results indicated that the most frequently reported stress events are related to interpersonal problems, followed by academic problems, loss of a significant other and finally health related problems. Age, sex and school variations occurred in the reported frequencies for these event categories. Factor analysis of responses to the item of The Ways of Coping inventory yielded an 8-factor structure for the instrument. Results of analysis on the factor scores indicated that seeking refuge in fate, optimistic approach, withdrawal, self-blame and seeking refuge in supernatural forces were more frequent among male and helpless approach and social support were more frequent among females. High school students having secular education employed active coping and optimistic approach more frequently than students having semi-secular education. The latter sub sample has a significantly higher usage frequency than the first for seeking refuge in fate strategy. Significant event by strategy interactions were also obtained; seeking refuge in fate, social support, optimistic approach, and withdrawal strategies were more frequent with the event category of loss whereas self-blame was most frequent with academic problems.

Every day individuals are forced to be aware of their appearance. Media images seen on television, in magazines and even advertisements portray the notion that beautiful is good and are a constant reminder that society judges its members based on their body size (which emphasizes thinness). This ideal can cause a decrease in self-esteem because individuals, especially women, constantly compare themselves with the cultural ideal of beauty and may feel that they do not measure up and lose confidence in their abilities. This concept is detrimental because a loss of self-esteem may affect adjustment to new situations, especially for the college freshman. Going to college for the first time is exciting but can also cause anxiety. The college freshman needs to adapt to a new place with new people and new sets of academic rules. They must deal with roommates and being away from their parents for the first time. They must have confidence in their abilities to make new friends and learn new time management skills because there is no one to tell them when to eat or when to study. This current study attempts to find if a relationship exists among the variables adaptation to

college, body satisfaction and self-esteem. Adaptation to college refers to the student's ability to cope with the stress that college brings in terms of academics, roommates and social situations.

Wintre and Yaffe (2000) studied adaptation to college in relation to parental relationships, and psychological well-being variables in both male and female freshmen. It was hypothesized that the current relationship between parent and student and psychological well being (depression, perceived stress and self-esteem) would affect student adaptation and achievement. Results indicated an increase in depressive symptomology predicted poorer adaptation for both male and female students. It also indicated that self-esteem in winter was a positive indicator of female adjustment because after six-months of being at college high self-esteem females experienced higher adaptation even if their initial reaction was not positive.

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Regular physical activity is important for weight management, for the promotion of insulin sensitivity, and for the regulation of glucose levels. Interventions to improve self-management have shown varying success, with some also demonstrating improved glycemic control.

Diabetes-related stress is common among those having diabetes. Concerns about long-term complications and feeling deprived of food are among the most common complaints made by the individuals afflicted with diabetes. Risk factors for high levels of diabetes-related stress include diagnosis of type, insulin use, female sex, significant psychiatric history, recent short-term complications, poor general health, and younger age. If the treatment regimen is not mastered, the frustration of not achieving treatment goals arises. Diabetes burnout, the severe demoralisation results due to the chronic demands of the disease and its treatment and the failure to achieve daily treatment goals (Polonsky, 1999).

Numerous cognitive, psychological, social, and environmental conditions have been found to stand as barriers to diabetes self-care. Diabetes regimens contain all the aspects that make any regimen difficult to comply with. Interventions to improve self-management have shown varying success. Problem solving is often one of the most difficult skills to teach, and yet it is the key to appropriate and effective self-management.

Self-regulation can be defined as a sequence of actions and/or steering processes intended to attain a personal goal. In other words, self-regulation consists of the individuals attempt to control his or her own behaviour over time and across contexts to achieve self-chosen goals. Any model of self-directed behaviour should therefore indicate an adequate representation of the concepts of personal goals and of the process of approximation towards personal goals. Existing models of health behavior do not fully meet these criteria.

Self-regulation can be explained based on the self-determination theory. This theory is concerned with the motivation behind the choices that people make without any external influence and interference. Self-Determination Theory focuses on the degree to which an individual's behaviour is self-motivated and self-determined (Deci & Ryan, 2002).

A basic tenet of the self-regulation theory is that motivation to change behaviour exists when the individual wishes to reduce a perceived discrepancy between his or her actual state and desired state (Schieir & Carver, 1988). The desired state may involve various goals. To perceive a discrepancy between actual and desired states, the person has to be self-focused and action-oriented (Kuhl, 1981). Changes in external as well as internal conditions may result in alterations of these factors and consequently lead to other desired states.

Resilience refers to the ability to bounce back from stressful and demanding situations. Resilience is a dynamic process that individuals exhibit positive behavioural adaptation when they encounter significant adversity or trauma. Resilience is a two-dimensional construct concerning the exposure of adversity

and the positive adjustment outcomes of that adversity (Masten & Obradovic, 2006). Though this ability appears to be innate or just part of which a person is, there are specific things these individuals do to help them recover without becoming overwhelmed and that help them stay on track (Schroeder, 2008).

The present study attempts to find the level of self-regulation and motivation for treatment and exercise among Type I diabetic patients. The literature available on self-regulation, motivation, resilience and diabetes are reviewed here with a view to deriving guidelines for designing the present investigation.

Diabetes and Self-Regulation

The coexistence of high levels of Identified Regulation with high levels of Intrinsic Motivation corresponded with higher scores on exercise enjoyment, while External Regulation and Introjected Regulation did not interact with Intrinsic Motivation (Vlachopoulos & Karageorghis, 2005). Participation in coping skills training with lower impact of diabetes on quality of life at baseline and less depression at baseline contributed significantly to a change in quality of life (Grey et al., 2001). Self-Regulation skills have been found to be positively related to changes in glucose level in diabetic patients (Huisman, 2009). Training patients with Type II diabetes to Self-Regulate their blood glucose by modifying their eating and exercise behaviours has not improved weight loss or glycemic control in diabetic patients (Wing et al., 1988). Self-efficacy has been found to be significantly more associated with adherence, whereas Autonomous Self-Regulation is significantly more associated with life satisfaction (Senecal, 2000). Diabetes education is effective in promoting Self-Regulation behaviours, although it has less effect on traditional regimen behaviours such as diet and exercise (Rubin, 1991).

Type 2 Diabetes Mellitus can be prevented and controlled with increased physical activity (Colberg, 2006). Physical exercise seemed to be the most important of the exogenous factors for the diabetic control (Ludvigsson, 2008). The intentional creation of a leisure space became an oasis for personal renewal (physical, psychological, emotional) that facilitated resilience and the capacity to proactively cope with or counteract stress among diabetics (Yoshitaka, 2005).

Low resilience is associated with fewer self-care behaviors when faced with increasing distress. In patients with diabetes, resilience resources predicted future HbA_{1c} and buffered worsening HbA_{1c} and self-care behaviors in the face of rising distress levels (Joyce, 2008). Resiliency counseling approach has been introduced for people with type 2 diabetes, which can be used to enhance standard diabetes education programs (Bradshaw, 2005). A link between maladaptive coping and low resilience is seen, suggesting that resilience affects one's ability to manage the difficult treatment and lifestyle requirements of diabetes (Joyce, 2009). Social support is significantly and positively correlated with resilience and self-care behaviour. In addition, resilience was significantly

and positively correlated with self-care behaviour (Huang, 2008). Resilient training for people with diabetes who have previously received standard diabetes self-education leads to higher levels of resiliency as reported by knowing positive ways of coping with diabetes-related stress, knowing enough about themselves to make right diabetes choices, having fun in life, eating healthy and increasing physical activity compared with the control group. (Bradsher 2007). Self-efficacy for diabetes self-management is associated to better self-reported life quality among individuals with diabetes (Rose et al., 2002).

The objectives of the present study are to examine the relationship between Psychological Resilience, Exercise Self-Regulation and Treatment Self-Regulation among Type I Diabetic patients.

METHOD

Sample

A purposive sample was selected for this study. The criteria used for including or rejecting any person for including in the sample were that he or she must be an adult diagnosed for diabetes and must be willing to faithfully participate in the study. The average length of the disorder after diagnosis in the sample taken for this study is 5 years. The sample included 60 adults diagnosed for Type 1 Diabetes. The sample included both males and females. The sample was drawn from two hospitals in Thrissur district, Kerala. The age of the participants ranged from 30 to 60 years.

Measures

The following instruments were used to obtain a measure of the variables chosen for the study:

- **BU Resilience Scale-Form B:** The scale developed by Annalakshmi (2008; 2009) consists of 30 Likert type items. The scale purports to measure resilience with reference to seven domains including duration for getting back to normalcy, reaction to negative events, response to risk factors (specifically disadvantaged environment) in life, perception of effect of past negative events, defining problems, hope/confidence in coping with future and openness to experience and flexibility. The scale yields a single score. The score is indicative of the level of resilience of the respondent: Higher the score on the scale, the higher is the resilience.

The Exercise Self-Regulation Questionnaire: The scale developed by Ryan and Connell (1989) consists of 12 Likert type items. The **SRQ-E** is composed of four subscales assessing external regulation, introjected regulation, identified regulation, and intrinsic motivation. The four sub-scales yield four scores reflecting the aspects of self-regulation bearing their names. External Self-Regulation refers to

extrinsically motivated behaviors that are least autonomous. Such behaviors are performed to satisfy an external demand or reward contingency. Introjected Self-Regulation involves taking in a regulation but not fully accepting it as one's own. It is a relatively controlled form of regulation but not fully accepting it as one's own. Identified Self-Regulation reflects a conscious valuing of a behavioural goal or regulation, such that the action is accepted or owned as personally important. Intrinsic Motivation occurs when identified regulations are fully assimilated to the self, which means they have been evaluated and brought into congruence with one other's values and needs. The higher the score on each scale indicates that the respondent has higher level of the self-regulation aspect assessed by the respective scales.

One of the basic issues of concern in studies on self-regulation is the degree to which one feels autonomous with respect to exercising or engaging in physical activity. The subscale scores on the SRQ-E are combined to form a Relative Autonomy Index (RAI). RAI is calculated as a function defined as $f(x) = f((2 \times \text{Extrinsic}) + \text{Identified} - \text{Introjected} - (2 \times \text{External}))$. The higher the RAI higher is the relative autonomy of the subject concerned.

- **The Treatment Self-Regulation Questionnaire:** The scale was developed by Ryan and Connell (1989), and consists of 19 Likert type items. The **TSRQ** is composed of two subscales assessing autonomous regulation and controlled regulation. Each of the items represents a reason for engaging in or changing a health behavior. The scale yields two scores, viz., autonomous regulation and controlled regulation. Higher the score on the scale higher is the tendency represented by the scale concerned.

Autonomous Regulation represents the most self-determined form of motivation, and has consistently been associated with maintained behaviour change and positive health-care outcomes.

Controlled Regulation includes two aspects – external regulation and introjected regulation. External regulation refers to behaviour that is performed in order to obtain a reward or to avoid negative consequences. Introjected regulation refers to behaviours that have been partially taken in by the person, and are performed to avoid feeling guilt or ego involved.

Procedure

To test the null hypotheses, criterion groups distinguishing high and low levels of resilience were formed out of the sample. The median of the distribution scores of the subject on BU Resilience Scale-Form B was used to identify the two levels of resilience. The median score of the distribution scores of the subjects on BU Resilience Scale-Form B was found to be 104. The subjects

who scored less than the median score were grouped as Low Resilience Group and those who scored higher than the median score were grouped as High Resilience Group. The number of subjects in the Low Resilience Group was 29 and the number of subjects in the High Resilience Group was 31. The mean and SD scores on resilience of subjects in the Low Resilience Group were 90.63 and 10.42 respectively. The mean and SD scores on resilience of subjects in the High Resilience Group were 116.47 and 7.95 respectively.

The significance of the differences between the high and low resilience groups on Exercise Self-Regulation and Treatment Self-Regulation were tested using Student-t.

RESULTS

The results of the t-test carried out to compare the criterion groups on resilience with regard to their exercise self-regulation and treatment self-regulation are presented below in the table.

TABLE-1

Significance of Mean Difference between the criterion groups on Resilience with regard to Self-regulation

Variable	High group on Resilience (n=31)		Low group on Resilience (n=29)	
	Mean 1	SD 1	Mean 2	SD 2
External Regulation	3.59	1.49	3.47	1.46
Introjected Regulation	2.43	1.40	2.61	1.21
Identified Regulation	5.66	1.16	4.99	1.47
Intrinsic Motivation	2.88	1.63	2.92	1.88
Exercise Self-Regulation RAI	1.47	4.22	1.49	4.07
Autonomous Treatment Regulation	5.15	1.06	4.48	1.55
Controlled Treatment Regulation	3.09	1.09	3.19	1.19

* Significant at 0.05 level

As may be seen in the table none of the t- is significant in the case of Exercise regulation. In the cases of treatment regulation t- is significant only in the case of autonomous treatment regulation and not in terms of controlled treatment regulation. It is concluded that the high and low levels of resilience are not distinguished from one another in terms of self-regulation, and they are distinguished only in the case of autonomous treatment regulation.

DISCUSSION

The findings show that the both high and less resilient individuals are not distinguished from one another with regard to exercise self-regulation. A significant difference between the high and low resilient was found on any of the measures obtained on the Exercise Self Regulation Questionnaire. Both resilient exhibit same degree of external, introjected, identified self-regulation as well as intrinsic motivation. It is likely that the higher resilient individuals have

diabetes seem to have not sensed more the need for exercises than others and hence have the same pattern of motivation as that of others.

The findings also suggest that the high resilient does not distinguish him/herself from less resilient on controlled treatment regulation.

With regard to differences between the high and low resilient on treatment regulations, it is found that the high resilient is having greater autonomous self-regulation than the low resilient though both are at par with one another in the case of controlled regulation.

Those high on resilient is having more autonomous self-regulation for treatment than the low resilient. The high resilient exhibits most self-determined form of motivation to follow treatment. This form of self-regulation has consistently been associated with maintained behavior change and positive health-care outcomes. The resilient individuals were able to appreciate the need for treatment and are able to follow the treatment regimen suggested on their own motivation. They show flexibility and are willing to accommodate changes in their behavior to adjust to the demands posed by the life style disorder. They are able to change their behavior to improve treatment outcomes.

It seems that individuals with diabetes are more aware of the benefit of treatment than the benefit of exercise for them. The findings also imply that resilience is more associated with self-regulation for treatment and the self-determining aspect of the individuals could be utilised to promote treatment plans to be adhered by them.

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REDUCING STRESS IN POLICE OFFICERS: A STUDY OF MOTIVATIONAL FACTORS AND JOB INVOLVEMENT

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ABSTRACT

The aim of present study is to study out the relationship between motivation and Job involvement in prison officer. In this study, two types of Needs have been taken, Need for monetary gains and Need for autonomy and self-actualisation. To measure the level of needs, Employee motivation schedule has been administered on a sample of 200 prison officers. While level of job involvement was measured by job involvement scale (Kapoor and Singh, 1978). To find out the relationship between need for monetary gains, need for autonomy and self-actualisation and job involvement, coefficient of correlations were computed. While relative contribution of need for monetary gains and need for autonomy and self-actualisation on the job-involvement were analysed by, step-wise multiple regression analysis.

The results show that both need for monetary gains and need for autonomy and actualization have significant positive relationship with job involvement because they are significant at 0.01 levels. Stepwise Multiple Regression Analysis suggests that need for monetary gain and need for autonomy and actualisation are significant predictors of job involvement in prison officers. It means job involvement is dependent upon the need for monetary gains and need for autonomy and self-actualisation.

Keywords: Need for monetary gains, Need for autonomy and Self actualisation, Job involvement

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Psychology plays an important role in the present organizations. For example, a private sector is largely more successful than a government sector. The reason is the behavior of the employee, which differs significantly in both types of organisations. In fact, the variation in human behaviour from one type of environment to the other is due to different input. A research in psychology establishes the relationship among such variables and may prove helpful in extracting a desirable human behaviour.

Present study has been conducted on prison officers because they have to work in very stressful and adverse conditions. It is cumbersome in such conditions to moderate their job involvement. The success of any department depends largely on job involvement of the employee. Some important variables affect negatively on job involvement; these factors reduce the level of job involvement, examine stressful conditions. However, some important variables or features have a positive effect on job involvement. These factors reduce the level of stress and increase the job involvement. Thus increased job involvement leads to decreased job stress.

In present study, two important variables have been selected for study: motivation and job involvement. The terms wants, desire and needs describe motivations that refer to the positive forces which impel one to work towards certain ends. The terms as 'fear' refer to negative forces, which repel people away from certain objects. Thus need refers to a requirement that must be met for healthy development.

The most commonly asked and discussed behavioural science technique is about the method by which one can increase the work motivation of employees at various levels. The impact of reward and punishment can be generated at the very broad level. These extrinsic factors seem to work through the intrinsic psychological status. For example, money as a motivator has a number of theoretical explanations. It could be a reinforcing event for one employee and a punishment for another person: yet another employee may consider this an anxiety reducing security factor, whereas, this could be an achievement for another group of persons. In this study, job involvement is the end variable which refers to the degree to which an individual internalises himself with the organisation which in turn reduces the stress experienced on the job.

Enhancing job involvement in any organisation is one of the most important problems for investigators and researchers. Though every employee in an organisation works with similar tools, machines and materials, yet individual differences in the level of job involvement are quite often evident which influence their output. The concept of job involvement has gained significance because of its important role in providing a link between productivity and employee's life and the quality of his working life.

Lodahl and Kejner (1965) have defined the term job involvement as the internalisation of value about goodness of work or the importance of work.

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Thus measures the ease with which the person can be further socialised by the organisation.

Bass (1965) has identified six conditions, which act as catalyst of job involvement. These include the opportunity to make more of the job decisions, the feeling that one is making an important contribution to organisational success, achievement, self-determination and freedom to set one's own work place.

Katz and Khan (1966) define job involvement by giving three arguments:

1. Job involvement is a necessary condition if the individual is to accept fully the organisation demands placed upon him by his membership in an organisation.
2. The degree of job involvement is related to the level of aspiration & to the degree of internalisation of organisational goals.
3. Job involvement is moderate for variable in the relationship between satisfaction and performance.

Maurer (1969) used the term 'work role motivation' to describe that degree to which an individual's work role is important in itself, as well as the extent to which it forms the basis of self-definition, self-evaluation and success-definition. Maurer refers to self definition as the degree to which an individual defines and conceptualises himself as a person primarily in terms of his work role. Self-evaluation is described as the extent to which an individual evaluates himself as a person in terms of his work role.

Patchen (1970) identified three general conditions for job involvement. According to him, "Where people are highly motivated, where they feel a sense of solidarity with the enterprise and where they get a sense of pride for their work, we may speak of them as highly involved in their job." When Patchen talks of workers being highly motivated, he refers to their high levels of achievement need to their wish to accomplish worthwhile things on the job; when he talks of worker's solidarity with the enterprise, he refers to their need for belongingness to the organisation.

Currently, Saleh (1981) has identified job involvement as a 'self-involving attitude'. According to him it is a multidimensional concept which the basic dimensions are cognitive, co-native (behaviour) and evaluative

Kanungo, Misra and Dayal (1975) are of opinion that the attitude of job involvement represents the degree to which the total job-situation is thought of being central to one's life or self-concept.

Kanungo (1979) proposes a motivational approach to the study of job-involvement that argues for maintaining a conceptual distinction between motivation and job-involvement. According to his approaches, satisfaction of intrinsic needs might increase the likelihood of job-involvement. Job involvement is closely related to motivation and job satisfaction, defined simply as the intensity of a person's psychological identification with his or her work. The higher one's identification or involvement with a job, the higher one's job satisfaction.

The present study attempt to find out the relationship between need for monetary gains, need for autonomy and self-actualization and job-involvement in prison officer. It was hypothesised that

1. There would be positive relationship between need for monetary gains and job-involvement in prison officers.
2. There would be positive relationship between need for autonomy and self-actualisation and job-involvement.
3. Need for monetary gains and need for autonomy and self-actualisation will significantly predict the job-involvement in prison officers.

DESIGN AND METHODOLOGY

The present study used a correlational design as control could not be exerted on the level of independent variables. In a correlational study, variables are measured as they are found to occur in the natural course of event.

Sample

The study was conducted on 200 prison officers incidentally selected from different jail in U.P and Sampooranand Jail training Institute, Lucknow (U.P). The age of respondents ranged between 30-50 years, with the average age of 40 years. Their monthly income ranged between Rs. 10,000-20,000. The qualification ranged between undergraduate to postgraduate. Their working experiences ranged between 10-20 years with an average experience of 15 years.

Tools

Employee's Motivation Schedule: It has been developed and standardized by Srivastava (1986). It consists of seventy statements with four alternative responses, namely always, mostly, seldom and never were used to assess needs in prison officers. Present employee motivation schedule focuses on needs being manifest at work (job), which generate work motivation, example need for personal growth, need for achievement, need for self-control, need for monetary gains, need for non financial gains, need for social affiliation and conformity, need for autonomy and self-actualisation.

Reliability split half test and test-retest method to ascertain the reliability of the schedule of seven sub scales. The reliability of need for monetary gains is 0.77 to 0.81 and the need for autonomy and self-actualisation is 0.72 to 0.78. The validity of the test has been ascertained by computing correlation (bi-series) between the score on the sub-scale. The validity of the scale was further ascertained by correlating the scores on the employee motivation measures with job-involvement and role-stress. The validity of need for monetary gains is 0.53 to - 0.32 and need for self-actualisation is 0.53 to - 0.38.

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Job-Involvement Scale: The Hindi adaptation by Kapoor and Singh (1978) of Lodahl and Kejner's job involvement scale consists of 20 statements (in Likert format) with four alternative responses namely strongly agree, disagree and strongly disagree was used to assess the job involvement in prison officers.

The items of the scale are framed in such a way that they can be used for measuring the degree of involvement of all the subjects irrespective of the nature of their work, organization, machines and tools they use. The index of reliability of the scale ascertained by computing Cranbach's alpha coefficients (1951) and index of reliability corrected by Spearman and Brown's formula was found to be 0.73.

This indicates that the scale is free from internal defects and processes. The fair amount of accuracy in assessing the extent of job-involvement, the index of homogeneity and internal validity of the scale were tested by computing the point biserial correlation (rpb). The scores of Lodahl and Kejner's job involvement scale was used as one of the validation criteria for this job-involvement scale was found to be 0.58 on a representative sample of 100 blue collar workers.

Procedure

Prior to administration of the test, prison officers were told about the utility of the study. Single prison officer was contacted at a time and one by one the psychometric devices employee motivation schedule and Job involvement scale was administered to them. These prison officers were asked to fill the questionnaires by themselves according to the instructions written on each of the questionnaires.

RESULTS AND DISCUSSION

Coefficient of correlation was computed to ascertain the relationship between needs and job-involvement. Stepwise multiple analyses were applied to find out the contribution of predictor variables on the job-involvement of prison officers.

TABLE-1

Inter correlation matrix for need for monetary gains, need for autonomy and self-actualisation and job involvement

S.No	Variables	Correlation Coefficients	P
1.	Need for monetary gains and job involvement	0.3932	.01
2.	Need for autonomy and self-actualisation and job involvement	0.4318	.01

TABLE-2
Summary of stepwise multiple Regression Analysis prediction for job involvement

Variables	R	F Ratio	P
Need for monetary gains	.24010	21.8265	.00
Need for autonomy and self-actualisation	.17245	7.8231	.00

DISCUSSION

Table-1 indicates that the coefficient of correlation between need for monetary gains and job involvement is positive and significant. This indicates that when the level of need for monetary gains increases job involvement also increases and vice-versa.

The results of stepwise multiple regression analysis presented in Table-2 revealed significant contribution of predictor variables on the job-involvement of prison officers. Need for monetary gains has a significant high variance $F=21.862$, $P<0.01$. It means job-involvement is dependent upon the need for monetary gains.

Need for autonomy and self-actualization is the variable which also yields a significant F value ($F=7.8231$, $P<0.01$). It means need for autonomy and self-actualisation variable predicts the job-involvement.

These results verify the three hypothesis which proposed a significant relationship between need for monetary gains/need for autonomy and self-actualisation and job involvement. Further, both the needs were significant predictors of job involvement.

Hines (1975) conducted a review of the literature on money and motivation and found that money is important when it comes to achieve level of involvement to the job. It seems obvious that employees regard money as a highly desirable commodity and the increased amount of it motivate increased behaviour.

Weissenberg and Gruenfield (1968) investigated the relationship between job involvements with various motivators. The intrinsic needs such as nature of supervisor's salary benefits and working conditions are positively related to job-involvement.

Sharma and Kapoor (1978) further observe that length of time that a person has been on the job is positively associated with job involvement. It has been found that individuals at higher ranks are more involved with their job than persons at lower end of job. Higher salary has also been found as cause for higher involvement.

Research has shown that stimulating job those high in autonomy, variety, task identity, feedback and workers participations are the ones that invite a strong sense of involvement.

Opsahl and Dunnette (1966) have listed five such theories, which support the above findings and hypothesis.

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1. Money as a generalized conditioned reinforcer: Studies by Wolfe (1936) when Cowles (1937) demonstrated that Poker chips acquired reinforcement value when they could be exchanged for food that is subject in their experiments worked as hard to get chips, which could buy food as they had previously worked for the food itself.
2. Money as a conditioned incentive: According to this point of view, money acquires as incentive value due to continued pairing with other incentive of a more basis nature.
3. Money as an anxiety reducer: The notion here is that the absence of money is generally associated with anxiety reactions in our society and therefore lack of money become conditioned stimulus for any anxiety response. Money in turn, therefore serves as a reducer of anxiety
4. Money as a hygiene factor: Money as hygiene factor which serves primarily as a dissatisfier that is it causes dissatisfaction when absent, but contributes little to satisfaction when present.
5. Money as a means of Instrumentality: In Vroom's VIE model, money acquires valence due to its perceived instrumentality for obtaining other desired outcomes. For example, if money were perceived as being instrumental to the positive goal of security, the money would acquire a positive valence. All these theories clarify the results as money or salary important incentives which increase the job-involvement and self-actualisation & job-involvement. It implies that high need for autonomy and self-actualisation leads to high degree of job-involvement and vice-versa.

The self-realisation or self-fulfillment or self-actualisation needs are those which when satisfied make the employee to give up dependence on others or even on the environment. He becomes growth oriented, self directed, detached and creative. To quote Maslow, "A musician must make music; an artist must paint, a poet must write, if he is to be ultimately happy what a man can be must be." This need we may call self actualisation. He has the desire to be more and more what one is to become everything that one is capable of becoming.

Saleh and Hosek (1976) describe the state of involvement be viewed as behavioral acts of the individual directed towards the satisfaction of his or her needs for autonomy and control. Vroom (1964) suggested that involvement might be viewed as the experience of satisfaction resulting from the fulfillment of an individual's self-esteem and self-actualisation needs.

In other words, we can say that the person who had achieved this highest level presses towards the full use and exploitation of his talents capacities & potentialities and become a self-actualised and very involved to the job. Because

when the workers know that they can use their potential, they work hard with full confidence and show better job-involvement.

Vroom (1962) proposed that a persons attempt to satisfy his or her need for self-esteem through work on the job lead to job-involvement. According to him, "The degree of job involvement for a particular person is measured by choice of "ego" rather than extrinsic factors in describing the sources of satisfaction and dissatisfaction on the job."

As our results support in the case of prison officers that high level of need for autonomy and self-actualisation leads to high job-involvement.

CONCLUSION

It is concluded from the investigation that the need for monetary gains, need for autonomy and self-actualisation and job involvement have high significant positive relationship with each other. Need for monetary gains and Need for autonomy and actualisation is the significant predictor of job involvement for prison officers.

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PREVALENCE OF DISORDERED EATING AMONG YOUNG FEMALE COLLEGE STUDENTS

C. Kalaivani Ashok* and S. Karunanidhi *

ABSTRACT

The present investigation was undertaken to assess the prevalence of disordered eating among young female college students in Chennai city. In addition, the study also aimed to determine the influence of certain psychological, nutritional and socio demographic factors on disordered eating. A survey was conducted on a sample of 2765 students from 10 Women's' Colleges across Chennai city. Disordered eating was assessed using the Eating Disorder Inventory-3 Referral Form- (EDI-3RF) and the Eating Attitude Test-26- (EAT-26). Body mass index, body fat percent, self-esteem depression, state and trait anxiety were also assessed. Data were analysed using descriptive statistics, chi square, logistic regression analysis and multivariate analysis. Percentage analysis showed the prevalence of abnormal eating attitude among young female college students to be 10.6%, while 14.8% were found to be at risk for an eating disorder. Among factors associated with weight control behaviours, high family support increased the odds for the use of healthy weight control behaviours, whereas a high body mass index, perception of being overweight and high peer influence significantly increased the odds for the use of healthy and unhealthy weight control behaviours. Body dissatisfaction emerged as the most important predictor of abnormal eating attitude, while socio economic status, body mass index and depression made small significant contributions to abnormal eating attitude. The results of the study revealed the presence of disordered eating and unhealthy weight control behaviours among young female college students in Chennai city. This suggests that nutritional counselling should be imparted to youth on the deleterious health consequences of disordered

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eating, particularly as a prevention measure. Special attention has to be given to youth at greatest risk for disordered eating behaviours such as those with high levels of body dissatisfaction, high body mass index, high socio economic status and with depressive symptoms.

Keywords: Disorder Eating, BMI, Eating Attitude, Body Satisfaction

Eating disturbances that were once characterised as 'western culture syndrome' are now found to be prevalent in diverse ethnic and socio cultural groups across the globe. According to Walcott, Pratt and Patel (2003), "Individuals from non-Western or non industrialised countries who adopt Westernized views of beauty, fitness, health, and success, will be at increased risk for developing disordered eating patterns and developing eating disorders." A rapidly industrializing nation of over one billion people, India has been identified as at risk for the incidence of eating disorders (Srinivasan, Suresh, & Jayaram, 1998). Yet, the absence of extant epidemiological studies in India makes the prevalence of eating disorders unknown. Among the few studies done on eating pathology in Indian populations, Srinivasan, Suresh and Jayaram, (1998) in a study of eating habits among 210 medical students found 14.3% showing distress related to eating habits and body size although they did not fulfil the criteria for a diagnosed eating disorder. Shroff and Thompson, (2004) who studied 96 Indian adolescents found potential risk factors that explain the development of eating-related problems to be similar to those found among Western adolescents. More recently, Tendulkar et al., (2006) reported faulty eating habits in 13.3% of college going adolescents in Mumbai city with higher scores on depression and suicidal ideation among those with faulty eating habits. These findings therefore suggest the presence of disordered eating among Indian adolescents and warrant further investigation in this direction to gain a deeper understanding of this emerging problem and factors related to it.

Various biological and psychological factors appear to be associated with eating problems. During adolescence, females with an overweight Body Mass Index (BMI) tend to be more at risk for developing an eating disorder (Neumann, Sztainer, Story, Falkner, Beuhring & Resnick 1999; Thomas, James & Bachman 2002). A positive relationship between BMI and weight control behaviour indicative of disordered eating behaviours has been reported (Kim, Kim, Cho 2008; Patricia, Patrick, Ip & Bibby, 2007). Low self esteem has been consistently identified as being a risk factor for the development of eating problems and women with eating disorders are known to have a significantly lower self esteem (Geller, Zaitsoff, & Srikaneswaran, 2002; Wilksch & Welch 2004). Poor self-esteem is associated with higher levels of body dissatisfaction (Pastore, Fischer & Friedman, 1996). Body dissatisfaction has been recognised as one of the most powerful predictors of eating disorder pathology. Depression and mood and anxiety are also associated with eating disorder. Ricciardelli

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McCabe (2003) found depression to be a predictor of body dissatisfaction and body change strategies among adolescents of both genders. Thomas, James and Bachman (2002) found depressed mood to be linked to disordered eating attitudes in a multiethnic female sample in Britain. Pastore, Fisher & Friedman, (1996) demonstrated that increased anxiety was associated with abnormal eating attitude in adolescents. In addition, several socio cultural factors such as socio economic status, certain family characteristics, peer factors, school attributes, and influence of media are also associated with eating problems (McCabe and Ricardelli, 2003; Wardle and Watters, 2004).

Further, disordered eating behaviours are of serious concern as they could lead to eating disorders. Researchers have found evidence that disordered eating patterns, such as excessive dieting, fasting, and bingeing, can lead to serious eating disorders, such as anorexia nervosa and bulimia nervosa (Neumark-Sztainer et al., 2006).

Thus, under the purview of these facts, the present investigation was undertaken to assess the prevalence of disordered eating among young female college students in Chennai city. In addition, the study also aimed to determine the influence of certain psychological, nutritional and socio demographic factors on disordered eating.

METHODS

Design and Sample

A cross-sectional survey design was used to find the prevalence of eating disorder risk, and abnormal eating attitude among female college students. The sample size was estimated based on the formula prescribed by Daniel, (1999). As previous studies quoting prevalence of eating disorder risk and abnormal eating attitude on Indian populations were inadequate, a prevalence rate of 50% was used in the calculation, which yielded a sample size of 385. However, as a prevalence rate of <10% was expected for eating disorder risk and abnormal eating attitude, a much larger sample size, around 2000 was targeted.

As the population of the study comprised of young female college students of Chennai city, aged 17-21 years, the study was conducted in 10 Women's' colleges out of the 20 Women's' colleges spread across the city. A stratified random procedure was used to select the women's' colleges in the different geographical divisions. Ten colleges were selected at random using lottery method from among the 20 colleges already identified ensuring proportionate representation from each area. The number of colleges selected from each area included four from the South and two each from the North, Central and West respectively. Since the target sample size was 2000, the number of students chosen from each college varied, between 170-300 students.

The subjects of the study included undergraduates between 17-21 years pursuing any bachelor's degree course from the 10 colleges chosen for study. A total sample of 2841 students were contacted for the purpose of study, but the final sample included 2765 students, the others were excluded providing incomplete information or for medical reasons reported i.e., being diagnosed with chronic diseases conditions (diabetes mellitus, hypothyroidism, cardiovascular diseases, etc.)

Age distribution of the sample depicted a majority of the students to be in the adolescent age range of 17-19 years, that is, 41.7 % were 18 years, 29.9 % were 19 years and 19.9 % were 17 years. A small percentage of the sample were above 19 years, that is, 7.5% were 20 years and 1.8% were 21 years respectively. With respect to religion, three fourths of the sample was Hindu (75.4%), while 12.6% were Muslims and 10.2% were Christians, 1.4% were Jains and 0.3% belonged to other religions. The socio-economic status of the sample was determined using the Kalliath SES Inventory (1999). The Kalliath SES inventory has no general norms and the scores were interpreted with reference to the contemporary social group parameters. Accordingly, it was found that 67% of the students belonged to middle-income group, 18.7% were from high-income group and 14.3% from low-income group respectively.

The subjects were categorised as belonging to different weight groups based on their body mass index in accordance with the WHO (2004) classification. The normal weight category included only about half the number of subjects (54.8%) while a considerable number of subjects belonged to the underweight category (26.9%) and those belonging to the overweight and obese categories were (13.2%) and (5.2%) respectively.

Body composition analysis showed only half the population (50.9%) had normal body fat per cent, while nearly a quarter of the subjects (23.2%) had a high level of body fat per cent (>30%) and slightly more than a tenth of the population, 11.9 and 12.5% respectively had very high (>35%) and very low (<20%) body fat per cent. Thus more than one third of the population studied (34.1%) had higher than normal body fat per cent.

Measures

The tools used in the study were the Kalliath SES Inventory (Kalliath, 1999) to assess the socio economic status and the Eating Attitude Test-26 (EAT-26) (Garner & Garfinkel, 1979) along with the Eating Disorder Inventory-3 (EDI-3) (Garner, 1984) to assess disordered eating. Further, depression, anxiety and self-esteem were assessed using Beck Depression Inventory (BDI) (Beck, 1967), State Trait Anxiety Inventory (STAI) (Spielberger et al., 1970) and Rosenberg Self Esteem Inventory (RSE) (Rosenberg, 1965). All the tools were standardized tools and had established reliability and validity.

Anthropometric measurements: Height was measured using a body meter (SECA-208) to the nearest 0.1cm, while the Omron Digital Body Fat Analyser (HBF-200) which incorporates both a weighing scale and a leg-to-leg bioelectrical impedance analyser, was used to measure weight (kg) and Percentage Body Fat (PBF) to the nearest one decimal place. Both the soles of the subjects' feet and the metal sole plates of the machine were cleaned with a dry cloth. The subjects were then asked to stand barefoot on the metal sole plates, with heels placed on the posterior plates and balls of the feet on the anterior plates. All had their hands by their sides and were facing forward when the analyser took the readings. Body weight along with BMI and percent body fat (PBF) estimated using the standard built-in prediction equations were displayed by the machine and recorded manually. In addition, age, gender and height were entered manually.

Procedure

After obtaining permission, from the college authorities, the investigator coordinated with the respective heads of the department, and the staff in charge, to fix a convenient time for collecting data from the students in the classes allocated.

The willingness of the students to participate in the study was first obtained before enrolling them in the study. The students were then briefed on the nature and importance of the study and motivated to lend their co-operation. During the first half-hour, the students filled in their responses to a tool on socio economic status namely Kalliath Inventory and then they completed answering the tools for assessing eating disorder risk and abnormal eating attitude namely (i) Eating Disorder Inventory - 3 RF and (ii) Eating Attitude Test- 26. The questionnaires were issued one by one in the same sequence as mentioned above, each being given after completion of the previous questionnaire. Following this, the students were given detailed instructions for filling the Demographic Profile, which covered information on a variety of aspects related to unhealthy weight control and dietary behaviours. After filling out the questionnaires, anthropometric measurements were taken for each individual privately. Height was measured using a Body meter (SECA Model -208) to the nearest 0.1cm, while weight and body fat measurements were done on Omron Digital Body Fat Analyser using the leg-to-leg bioelectrical impedance method. The investigator along with a dietician who had adequate training in Nutritional Anthropometry took the anthropometric measurements. All the students present in the class on the day of data collection were included in the study. Data were collected from a maximum of 40 students per session. In cases where the strength of the class exceeded 40, the students were divided into two batches and the assessments were done separately for each batch in two sessions. In each college, the number of students allotted varied from 170-300. Accordingly, a minimum of 4 to a maximum of 8 sessions were conducted. Thus, it took 72 sessions to collect data from 2841 students from 10 colleges spread across a period of 4 months from June

2010 to September 2010. Data from 2765 students were included for final analysis, the others being rejected based on the exclusion criteria or due to incomplete information.

Further, out of 2765 sample, a sample of 900 were contacted again on the next day after the first data collection for the purpose of collecting data on psychological factors such as self esteem, depression state and trait anxiety. Data was collected this time in 7 out of the 10 colleges that granted permission for a successive data collection. This time, the students responded to the following set of questionnaires i) Beck Depression Inventory (Beck, 1967), ii) Spielberg's State Anxiety Inventory (Spielberger et al., 1970) iii) Spielberg's Trait Anxiety Inventory (Spielberger et al., 1970) and iv) Rosenberg's Self-Esteem Inventory (Rosenberg, 1965). The students completed these questionnaires in 30-40 minutes. Data were collected from 80-120 students in each college. This involved additional 20 sessions of data collection. 900 students were included but data for final analysis was from $n=877$, and the rest were rejected for providing incomplete information.

Weight Perception

Weight Perception was assessed by asking the question Do you think you are 1) underweight 2) over weight 3) about the right weight and 4) don't know. The weight perception responses were compared with the actual body mass index categories and the percentage having correct perception and perceived overweight were deduced and used for further analyses.

Weight Control Behaviour

Weight control behaviour was assessed by the following question: "Are you trying to do anything about your weight?" Response categories 1) I am trying to lose weight 2) I am trying to gain weight 3) I am trying to stay the same weight and 4) I am not doing anything about my weight. Percentages under each category were calculated and those trying to lose weight were further asked about the type of weight control behaviours adopted. "Have you done any of the following things in order to lose weight or keep from gaining weight during the past year?" (yes/no for each method). Response categories classified as healthy weight control behaviours included (1) dieting (eating less, avoiding foods rich in fat, sugar or eating more fruits, etc.), and (2) exercising (to burn more calories or fat). Response categories classified as unhealthy weight control behaviours included (1) fasting, (2) skipping meals, (3) using food substitutes (powder/special drink), (4) taking diet pills, (5) vomiting after eating excessively, (6) using laxatives, and (7) using diuretics.

Family Support

Family support was assessed with two questions for each parent – 1. (a) "My mother encourages me to control my weight", and (b) "My father encourages me to control my weight". 2. (a) "I can share my problems with my mother"

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and (b) "I can share my problems with my father". Response categories for each statement included (1) always, (2) often, (3) sometimes, and (4) never. Scores were assigned and the responses were dichotomised into Low or High support based on a total score for family support.

Peer Influence

Peer influence was assessed with a question on weight control "I tend to lose weight or keep from gaining weight because of my friends". Never. Scores were assigned and the responses were dichotomized into Low or High support for weight control. Response categories included 1) always 2) often 3) sometimes 4) never. Scores assigned were always-4, often-3, sometimes-2, and never-1. The responses were dichotomised into Low or High support for weight control.

Analysis

Percentage was computed in order to find the prevalence of eating disorder risk and abnormal eating attitude among young female college students in Chennai city. Multi-linear regression analyses were used to determine the influence of socio economic status, body mass index, body fat percent, body dissatisfaction, self esteem, depression, state and trait anxiety on abnormal eating attitude. Chi square analysis was done to find the association between weight control behaviours and socio demographic factors such as family support, frequency of family meals, weight status, weight perception, peer and family influence. The associations found significant in the chi square analysis were further studied using logistic regression analysis.

RESULTS

Out of the 2765 college students assessed, 10.6% had abnormal eating attitudes, scoring higher than the cut-off value of 20. The prevalence of those with an eating disorder risk as assessed using the EDI-3RF was found to be 14.8%. High body dissatisfaction though not included as a criterion for categorizing those at risk, but considered as a robust factor in the development of eating disorders was found to be high among 7.6% of the college students.

The findings in the present study showed that 31.8% of the subjects were trying to lose weight, while 19.2% were trying to maintain their present weight and 30.3 % were not doing anything about their weight. Further, healthy or moderate weight control behaviours such as dieting and exercising were reported by 24.6% and 20.1% of subjects respectively. Unhealthy or extreme weight control behaviours were also prevalent in the study population, wherein 11.8% of the subjects reported fasting, 19.2% adopted skipping of meals, 6.4% used food substitutes (special drink/powder) and 1.0% used diet pills. A very small percentage reported use of extreme weight control measures such as vomiting after eating excessively (1.6%), use of laxatives (1.0%) and diuretics (0.6%). These findings indicate the use of both moderate and extreme unhealthy weight control behaviours among young female college students of Chennai.

TABLE-1

Association of Healthy Weight Control Behaviours with Weight Status, Weight Perception, Family Support, Frequency of Family Meals and Peer Influence

Variables	Healthy weight control behaviours				Sig
	Absent (1802)		Present (960)		
	n	%	n	%	
Weight status					
Under weight (744)	665	89.4	79	10.6	0.00
Normal (1511)	990	65.5	521	34.5	
Overweight (364)	118	32.4	246	67.6	
Obese (143)	29	20.3	114	79.7	
Weight perception					
Correct perception (1368)	829	60.6	539	39.4	0.00
Perceived over weight (195)	93	47.7	102	52.3	
No definite perception (1199)	880	73.4	319	26.6	
Family support					
Low (1918)	1404	73.2	514	26.8	0.00
High (843)	397	47.1	446	52.9	
Frequency of family meals					
Low (1607)	1051	65.4	556	34.6	0.45
High (1154)	751	65.1	403	34.9	
Peer influence					
Low (2505)	1693	67.6	812	32.4	0.00
High (257)	109	42.4	148	57.6	

**p<0.01 *p<0.05 NS – not significant

On examining the association between certain demographic factors related to healthy and unhealthy weight control behaviours, the findings revealed that healthy weight control behaviours were significantly associated with weight status, weight perception, family support, and peer influence ($p<0.01$) (see Table 1). Healthy weight control behaviours were not significantly associated with frequency of family meals. All other variables studied such as weight status, weight perception, family support and peer influence were significantly associated with healthy weight control behaviours.

Results of the logistic regression analysis for factors associated with weight control behaviours (see Table-2) revealed obese subjects as having the highest odds for the use of healthy weight control behaviours (20.0, $p<0.01$), followed by overweight (13.7, $p<0.01$), and then by normal weight subjects (3.9, $p<0.01$) as compared to underweight subjects. These findings depict greater odds for the adoption of healthy weight control behaviours with increase in body weight. Similarly, perception of being overweight, high family support and high peer influence significantly increased the odds for the use of healthy weight control behaviours.

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TABLE-2

Influence of Weight Status, Weight Perception, Family Support and Peer Influence on Healthy Weight Control Behaviours

Variables	Healthy weight control behaviours	
	O.R	C.I.
Weight status		
Normal weight	3.9**	3.0-5.0
Over weight	13.7**	9.9-19.0
Obese	20.0**	12.3-32.6
Weight perception		
Perceived overweight	1.9**	1.4-2.7
No definite perception	0.7**	0.6-0.8
Family support	1.7**	1.4-2.1
Peer influence (on weight control)	1.8**	1.3-2.5

**p<0.01

TABLE-3

Association of Unhealthy Weight Control Behaviours with Weight Status, Weight Perception, Family Support, Frequency of Family Meals and Peer Influence

Weight status	Unhealthy weight control behaviours				Sig
	Absent (1908)		Present (848)		
	n	%	n	%	
Under weight (743)	556	74.8	187	25.2	0.00**
Normal (1508)	1066	70.7	442	29.3	
Overweight (363)	216	59.5	147	40.5	
Obese (142)	70	49.3	72	50.7	
Weight Perception					
Correct Perception (1365)	920	67.4	445	32.6	0.00**
Perceived over weight (195)	121	62.1	74	37.9	
No definite perception (1196)	867	72.5	329	27.5	
Family support					
Low (1912)	1344	70.3	568	29.7	0.06NS
High (843)	563	66.8	280	33.2	
Frequency of family meals					
Low (1602)	1086	67.8	516	32.2	0.05NS
High (1153)	822	71.3	331	28.7	
Peer influence					
Low (2500)	1777	71.1	723	28.9	0.00**
High (256)	131	51.2	125	48.8	
**p<0.01					

**p<0.01 *p<0.05 NS - not significant

Out of the variables considered for association with unhealthy weight control behaviours, (refer Table-3) weight status, weight perception and peer influence were significantly associated with unhealthy weight control behaviours.

Frequency of family meals and family support were not significantly associated with unhealthy weight control behaviours.

TABLE-4

Influence of Weight Status, Weight Perception, Peer Influence and Frequency of Family Meals on Unhealthy Weight Control Behaviours

Variables	Unhealthy weight control behaviour	
	O.R	C.I.
Weight status		
Normal weight	1.2 NS	95-1.4
Overweight	1.9 **	1.4-2.5
Obese	2.5 **	1.7-3.7
Weight perception		
Perceived overweight	1.5 *	1.1-2.0
No definite perception	0.9 NS	0.7-1.0
Peer influence (on weight control)	1.9 **	1.5-2.5

**p<0.01 *p<0.05 NS - not significant

Results of the logistic regression analysis (see Table-4) for factors associated with unhealthy weight control behaviours, revealed obese (1.9, p<.01) and overweight (1.2, p<.01) subjects, as having significantly higher odds than underweight subjects for the use of unhealthy weight control behaviours. Besides this, female college students who had a perception of being overweight, and those who reported being highly influenced by their peers had significantly higher odds for the use of unhealthy weight control behaviour.

TABLE-5

Hierarchical Regression Analysis for Predictors of Abnormal Eating Attitude

Predictors	Abnormal Eating Attitude	
	ΔR^2	β
Step 1		0.309 ^a
Body Dissatisfaction		
Step 2	0.033	
Body Dissatisfaction		0.303 ^a
Socio economic status		0.179 ^a
Step 3	0.011	
Body Dissatisfaction		0.232 ^a
Socio economic status		0.147 ^a
Body mass index		0.134 ^a
Step 4	0.013	
Body Dissatisfaction		0.198 ^a
Socio economic status		0.146 ^a
Body mass index		0.155 ^a

Contd. table 1

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Contd. table 5...

Depression

0.152

R²

877

N

0.118**

**p<0.01 *p<0.05

Note R² for step 1 = 0.095

Findings of the hierarchical regression analysis to determine the independent variables that predict abnormal eating attitude, revealed that body dissatisfaction made the most significant unique contribution and explained a variance of 9.5% in abnormal eating attitude. In addition, variables such as socio economic status, body mass index and depression improved the predictions for abnormal eating attitude in each successive step, by increasing the variance to 12.8%, 13.9%, and 15.2% respectively. The variables, which did not render a significant unique contribution, were body fat percent, self esteem, state and trait anxiety.

DISCUSSION

In the absence of extant epidemiological studies, the prevalence of eating disorders and disordered eating remains unknown in India. The present study was initiated with an initiative to provide a database on the prevalence of abnormal eating attitude and eating disorder risk and to ascertain the relevance of this emerging health issue in the study population. The findings of the present study revealed that the prevalence of abnormal eating attitude with those scoring ≥ 20 on the EAT-26 was found to be 10.6%. The prevalence of those with an eating disorder risk as assessed using the EDI-3RF was found to be 14.8%. These rates of prevalence were similar to those quoted in studies conducted worldwide. For instance, studies that have examined the prevalence of disordered eating behaviours among adolescents and youth in western nations have reported a prevalence ranging from 9% to 11.3% (Shisslak, Crago, & Estes, 1995; Stice, Killen, Hayward, & Taylor, 1998). The prevalence of abnormal eating attitudes among either adolescents or youth from non western populations are 7% among Korean students (Yang, Kim & Yoon, 2010), 14% among South African adolescents (Le Grange, Louw, Russel, Nel, and Silkstone (2006), 11.5% among Turkish university students (Bas, Asci, Karabudak and Kiziltan, (2004), 13.3% among university students in Mumbai, India (Tendulkar et al., 2006).

The development of disordered eating is best conceptualised as multifactorial. Several factors such as socio cultural, socio-economical, biological, nutritional, psychological and familial have been identified as being involved in the development of disordered eating. Therefore, in the present study an attempt was made to determine the contributions made by a select group of factors such as socioeconomic status, body mass index, body fat percent, depression, trait anxiety, state anxiety and self-esteem on abnormal eating attitude in a sample of 877 female college students.

The hierarchical regression analysis conducted to determine the extent to which various factors contribute to abnormal eating attitude, revealed that body dissatisfaction, body mass index, depression and socioeconomic status were significant predictors for abnormal eating attitude. The findings with respect to BMI and abnormal eating attitude has been supported by several studies conducted previously (Le Grange, Louw, Russel, Nel, and Silkstone, 2006; Jones, Bennett, Olmsted, Lawson and Rodin, 2001; Erol, Toprak and Yazici, 2006). The co-occurrence of overweight status and use of disordered eating behaviors was found to be high, particularly among female adolescents (Neumark-Sztainer et al., 2006; Neumark-Sztainer et al., 2002). The relationship between body weight and eating pathology dates back to the time when obesity was first considered as a psychiatric disorder (Kaplan & Kaplan, 1957). To derive the meanings from the relationship between body mass index and abnormal eating attitude it is important to analyze the role of socio-cultural influences on eating. Societal idealisation of thinness has been blamed for body dissatisfaction which in turn has been hypothesized to drive efforts at weight control that are either too effective (resulting in anorexia nervosa and bulimia nervosa) or counterproductive (resulting in weight gain and obesity) (Ruderman & Wilson, 1979). From this perspective, it is evident that higher body weight is instrumental in the development of an abnormal eating attitude that could reflect body dissatisfaction and unhealthy weight control behaviour. On the other hand body fat percent did not emerge as a significant contributor of abnormal eating attitude and this could be due to the compound influence of body fat per cent on body mass index.

With respect to the relationship between depression and abnormal eating attitude, previous researchers have also reported significant positive associations between disordered eating behaviours and depressive symptomatology (Mills, 1988; Fairburn & Cooper, 1984; Tendulkar et al., 2006). Regarding the relationship between socio economic status and abnormal eating attitude, studies from western countries have reported disordered eating to increase with socioeconomic status in adolescents (Lachenmeyer, Muni-Brander, & Belford 1988) and women (Rogers, Resnick, Mitchell, & Blum, 1997). Likewise studies conducted in Asia (Lee & Lee, 2000) also support an association between SES and eating pathology. It should be noted that while considering the relationship between socioeconomic status and abnormal eating attitude, it is also necessary to look at the relationship between socioeconomic status and body mass index. It is evident from the present study as well as from previous reports that socioeconomic status has a significant bearing on body weight which in turn promotes weight control behaviours which comprise an abnormal eating attitude. Therefore, the direct influence of high socioeconomic status on abnormal eating attitude, could be circumvented through the relationship between high socioeconomic status and body mass, body dissatisfaction and abnormal eating attitude.

On the other hand, self esteem, trait and state anxiety did not emerge as significant factors predicting abnormal eating attitude in the present study. Of these, self esteem has been postulated as a contributor and predictor of disordered eating in several studies done previously (Button et al., 1998; McCabe & Vincent 2003). However, in the present study, self esteem did not surface as a significant protective factor of abnormal eating attitude probably because body image and body appearance dimensions of self-esteem have not been individually measured and instead a global self-esteem tool has been used. Nevertheless, similar to the findings in the present study, a lack of association between self esteem and abnormal eating attitude has also been reported by Erol et al. (2006) in a study conducted on Turkish men and women. Again state and trait anxiety did not make a unique contribution to abnormal eating attitude, which could be due to the fact that adolescents experience greater anxiety on issues of immediate concern such as examination anxiety, public speaking, interpersonal relationship, academic achievement, career ambitions etc rather than anxiety centered on food intake. On the other hand, it could also be attributed that the proportion of anxiety related to abnormal eating attitude would have been included under the effect of depression on abnormal eating attitude.

The present study also examined the prevalence of specific weight control behaviours and associations with socio demographic characteristics such BMI and weight perceptions, family support and peer influence. This was in recognition of the fact that weight control is an important concern of adolescents and adults for reasons of both health and physical appearance. Although weight control may decrease the risk for chronic disease in adulthood, overemphasis on thinness in adolescence can lead to unhealthy weight-loss practices and may contribute to the development of eating disorders. Factors that were found to be associated with healthy and unhealthy weight control behaviours in the present study, were, body mass index, perception of being overweight and peer influence. With regard to body mass index, results of the logistic regression analysis revealed that both overweight and obese subjects reported an increased likelihood for the practice of weight control behaviours as compared to normal weight subjects. These findings are in line with reports from previous studies by, Neumark-Sztainer et al., (1997), Neumark-Sztainer, Story, Falkner, Beuhring, & Resnick, (1999) where overweight female and male adolescents were at a higher risk for dieting and binge eating. Boutelle et al. (2002) explains that overweight adolescents could be farther from their ideal weight and looking for a quick solution and if having failed to lose weight using diet and exercise they tend to use these unhealthy weight control strategies as their last hope. The findings of the present study were therefore in the expected direction.

Reports from several studies have shown that perception of being overweight rather than actual body mass index triggers adoption of weight control measures.

Kim et al., (2008) have reported that women who perceived themselves heavier than their actual BMIs appeared more likely to use unhealthy weight control behaviours. Other reports (Patrick et al., 2007; Conley & Boar 2006) also state that females who perceived themselves as overweight were more likely to exercise, restrict caloric intake, self medicate with diet pills, purge, or use laxatives. Similarly, in the present study those who perceived themselves to be overweight had higher odds for using both healthy and unhealthy weight control behaviours than those who perceived their weight correctly, indicating that perception of one's body weight played a significant role in determining the practice of weight control behaviours. In other words, it is not absolutely necessary for a college student to be overweight or obese to adopt weight control behaviours, in fact, she would adopt weight control behaviours if she perceived herself as being fat, even if she were of normal weight or underweight.

Parents can play a key role in child weight-related behaviours. Family climate has been related to unhealthy weight control practices (e.g., extreme dieting, vomiting). In the present study significant associations between family support and healthy weight control behaviours was found, with high family support increasing the likelihood for adoption of healthy weight control behaviours. However, no such association between unhealthy weight control behaviours and family support was seen. High family support among obese and overweight subjects depicted in the present study could be extended to parental involvement in encouraging healthy weight control behaviours. These findings underline the positive influence on weight control through family support. Though cross-sectional studies (Neumark-Sztainer et al., 2004; Fulkerson et al., 2006; Fulkerson et al., 2007) indicate that adolescents who reported frequent family meals were less likely to engage in disordered eating behaviours than adolescents who ate fewer family meals, in the present study no significant association between frequency of family meals and weight control behaviours was found.

Peer attitudes toward weight concerns have been correlated with high prevalence of disordered eating behaviour. Evidence suggests that a girl's peer group promotes a subculture that may either enhance or diminish the idea of thinness and weight loss behaviours (Eisenberg, Neumark-Sztainer, Story, & Perry, 2005). Adolescent girls' frequency of discussion with peers concerning dieting and weight concerns correlates significantly with their reported disordered eating behaviour (Eisenberg et al., 2005; Gerner & Wilson, 2005; Schutz & Paxton, 2007). Similar to the findings in the present study also revealed peer influence significantly associated with both healthy and unhealthy weight control behaviours. Besides high peer influence was also found to increase the likelihood for use of both healthy and unhealthy weight control behaviours, suggesting that weight concerns are central issues in adolescent peer relationships, and that peer influence is a determinant of weight control behaviours.

CONCLUSION

The prevalence of abnormal eating attitude and eating disorder risk among young females college students in Chennai reveal the presence of disordered eating at rates comparable to those reported world over, thereby, questioning the conventional belief that traditional societies are protected from eating pathology. Body dissatisfaction emerged as the most important predictor of abnormal eating attitude, while socio economic status, body mass index and depression also made significant contributions to abnormal eating attitude. A higher weight status, perception of being overweight and peer influence significantly increased the odds for the use of weight control behaviours both healthy and unhealthy, while high family support increased the odds only for the use of healthy weight control behaviours. Thus, it is evident that unhealthy weight control behaviours and disordered eating exist in the study population which necessitate spread of awareness and education on healthy weight control behaviours among female college students in Chennai and other metropolitan cities in India. Thus, special attention needs to be given to youth at greatest risk such as those with high levels of body dissatisfaction, high body mass index, high socio economic status and depressive symptoms to prevent the onset of disordered eating.

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RELIGION AND HEALTH: AN INQUIRY INTO THE RELATIONSHIP

A.K. Srivastava* and Anshula Krishna**

ABSTRACT

The study, in fact, attempted to examine partially the validity of the biopsychosocial model of health. The study examined the impact of religion-specific culture, life style, belief-systems, and health behavior and practices on physical and psychological health and on responses to illness (i.e., diagnosis of the symptoms, cure-action and adherence, and recovery from illness). The study compared Hindus, Muslims and Christians with regard to the status of their physical health and psychological well-being and their responses to illness. The study revealed significant variation in physical as well as psychological health across the religions. Christians were found to manifest significantly lesser symptoms of physical as well as psychological ill health as compared to Hindus and Muslims. Hindus indicated to maintain better physical and psychological health than Muslims did. The results also suggest that religion causes significant variation in diagnosing pattern and cure-action and adherence to the people of different communities. However, no significant difference could be noted in speed of recovery in three religious groups.

Keywords: Religion, Culture, Health.

Health has been described and explained in various discourses that are socially constructed. The concept of health, mind and body vary across time and place, but for all cultures and cosmologies, they play a fundamental role in the experience of being human. However, there has been long controversy regarding causes of ill health and criterion of good/sound health. People in different eras and societies have also been adopting different systems of cure.

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During the era of hunter gather people used to relate mental and physical illness to mystical forces, such as evil spirit or magic etc. Early 18th century was the time of shift from supernatural phenomenon to clinical phenomenon to growth of knowledge of science and medicine, which led to the 'biomedical model' of health.

The biomedical model gained more popularity because it considered a bio view of human physiology and produced a quick and steady mode of diagnosis, cure and recovery from illness. However, this approach totally neglected psychological and social factors, and did not allow the opportunity to understand the disease in the context in which illness occurs, such as family background, work and family stress, communities, work group etc. Gradually the role of psychological, behavioural and social factors in health started gaining recognition and was established. Disciplines of 'psychosomatic medicine', 'behavioural medicine' and 'health psychology' emerged in the second half of the 20th century. This approach to understand health and to analyse the causes of health in broader framework emerged as a new model of health in 1977, the 'biopsychosocial' model.

Besides the biological and psychological factors, socio-cultural factors seem to play significant role in determining health of people in a community. Health systems of the society and its culture develop specific health-belief and health behavior among its members. The way people think about health, become ill, react to illness is rooted in the broader health-belief systems that are deeply immersed in culture. The conceptualisation of health belief is a result of complex dialectical relationship of different sub-components within a culture. People's health, health behaviour and practices, and reactions to illness require a deep understanding of culturally specific and indigenous health-belief system to hold. Health-beliefs explain people's causation of illness and certain health behaviour they generally adopt to deal with illnesses. The model argues about the beliefs people may hold regarding their susceptibility to develop illness, severity and consequences of illness, effectiveness of cure actions, self-efficacy to cope with illness and recovery from illness.

Religion is a major and important component of any culture. Religion specific culture prescribes a particular type of life style for its followers. It prescribes and proscribes certain types of behaviour, habits, practices and diet and even thoughts and ideologies to be adopted by the people in a community. However, there is need to know how cultural customs, religious practices and socio-cultural factors shape the everyday lives of different ethnic groups (Anderson & Armstead, 1995; Kaplan, 1995). Cross-cultural studies are needed to identify the specific and differential roles of various cultural components in determining health state and reactions and responses to illness, so that specific and useful recommendation could be made for prevention of illness, health preservation and improvement of health.

Religion, and Health: An Inquiry into the Relationship

The cultural variation in causal attribution for illnesses have been substantially investigated, reported and discussed. Nevertheless, the culture and religious-association influence the health of the people has not been systematically examined and analysed. However, few studies have reported cross-cultural and cross-national differences in health behaviour and so the health status. Increase in health behavior was found significantly higher among Americans than Britons and French (Retchin, Wells, Valleson & Albrecht, 1992). National Centre for Health Statistics (U.S.A, 2000) reported that most American feel to be in good health. But this was not true for all segments of the population. Relatively bigger segment of African Americans and American Indians reported their health as 'fair' or 'poor' as compared to whole population. Cross-cultural differences in longevity also reflect the impact of culture on physical well-being of people. Weg (1983) reported that in U.S.A. and Britain only 3 persons out of every one lakh live over 100 years, whereas in Georgia (among the Abkhazians) 400 out of every one lakh live over 100 years. Weg attributed the longevity of Abkhazians to a combination of biological, life style and socio-cultural factors, including genetics, various work role habits, dietary, no use of alcohol or nicotine, high level of social support and low level of stress.

Objectives

Keeping the above fact in view, the present study aimed at examining whether religion-specific cultures and life style cause significant variance in health status and reactions to illness of the people in different communities. The specific objectives of the study were:

1. To compare the status of physical and psychological well-being of the people belonging to Hindu, Muslim and Christian communities in order to ascertain whether the religion-specific cultures, life styles, ideologies and belief systems put differential effect on health and psychological well-being of people of different communities or religious groups.
2. To compare the responses to illness (i.e. diagnosis of the symptoms, adoption of mode of treatment and adherence and recovery from illness of the people in three religious communities in order to ascertain whether religions-specific culture significantly influence people's responses to illness.

METHOD

Sample

The study was conducted on 250 male and female adult and senior adults belonging to middle class Hindu (N=123), Muslim (N=91), and Christian (N=36) communities. The participant's age ranged from 35 to 70 years with a mean of 42.63 years. Attempt was made to maintain a match among the three religious groups with regard to relevant demographic and socio-economic variables.

Tools of Measurement

Following tools of measurement were employed in the investigation:

Pennebaker Inventory of Limbic Languidness (The PILL) (Pennebaker 1982): The 54 items inventory taps the frequency of the occurrence of a group of common physical symptoms and sensations indicating ill health in general. The frequency of occurrence of specific health problems are never, 3 to 4 times in a year, almost every month, almost every week, and more than once in a week. Cronbach alpha coefficients ranged from 0.88 to 0.99. Test-Retest reliability index ranged from 0.79 to 0.83.

Disease and Medical Aids Taken: In addition to the general symptoms of ill-health assessed through Pennebaker's Inventory, a record of the suffering from different diseases (such as high or low blood pressure, diabetes, cholesterol, ulcer, heart disease etc.) and different types of medical aids taken were also obtained. The participants were asked to mention the severity and duration of the illness.

General Health Questionnaire (Goldberg, 1978): The 28 items measures the psychological aspect of quality of life. The items to be rated on 4-point scale relate to four dimensions of ill health (psychological) – somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression. High score on the scale indicates poor psychological health. The Cronbach alpha coefficients of the sub-scale vary around .82 and mean of inter-item correlation was .92.

Responses to Illness Scale (Srivastava, 2009): The scale comprises 3 independent sub-scales to measure the three dimensions of immediate and consequent responses to illness, that is, diagnosis of the symptoms, adoption of treatment and adherence, and recovery from illness.

- (i) *Diagnosis of the Symptoms*: The scale consists of 8 items to be rated on 3-point scale. The scale measures the sensitivity to the symptoms and vague and apprehension about the symptoms of illness. The Principal component analysis revealed three factors, that is, apprehensive and anxious approach to diagnosis, avoidance, and unrealistic diagnosis. Cronbach alpha values for the three sub-scales are 0.77, 0.703, and 0.75 respectively. High score on the scale indicates an unrealistic and negative diagnosis.
- (ii) *Mode of Treatment and Adherence*: The 13 items scale assess the respondent's sincerity and promptness to cure action and the extent of faith in it, and adherence to treatment. High score on the scale indicates propriety of adopted treatment and high adherence.
- (iii) *Recovery from Illness*: The scale consisting of 9 items to be rated on 3-point scale assess the speed of recovery from illness, and subjective self-efficacy, and optimistic attitude toward recovery.

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RESULTS

The obtained data were statistically analysed to examine the effect of religion on health. The results are presented in following Tables (1-5):

The analysis of the differences between the means of physical ill health of Hindu, Muslims and Christian's were found to be significant ($F=6.77$, $P<.00$) The participants belonging to Christian community maintained markedly better health than Hindus and Muslim participants. Hindus manifested relatively lesser symptoms of ill health than Muslim did, but difference was not found to be significant.

TABLE-1

Comparison of Three Religious Groups with regard to their Physical Ill Health Status

Religious Groups	N	Mean	SD	Post-Hoc Tuckey Test		
				Mean Diff.	Std. Error	Sig.
Hindu (H)	123	110.32	30.10	H vs. M-5.35	3.84	.348
Muslim (M)	91	115.65	26.76	H vs. C15.01	5.26*	.013
Christian ©	36	95.31	20.82	M vs. C20.34	5.46**	.001

** $p<0.01$, * $p<0.05$

The analysis of psychological ill health also revalue significant variation, ($F=11.25$, PC 0.00. The participants belonging to Hindu, Muslim and Christian communities (Table 2) significantly differed in the status of their psychological health. The results specify that Christians manifested relatively lesser symptoms of psychological ill health, that is, somatic symptoms, anxiety, acute depression and social dysfunction in comparisons to Hindus and Muslim. Muslim participants indicated to maintain poorest psychological health.

TABLE-2

Comparison of Three Religious Groups with regard to their Psychological Ill Health

Religious Groups	N	Mean	SD	Post-Hoc Tuckey Test		
				Mean Diff.	Std. Error	Sig.
Hindu (H)	123	49.54	13.11	H vs. M-4.62	1.78*	0.027
Muslim (M)	91	54.15	13.12	H vs. C7.34	2.44**	0.008
Christian (C)	36	42.19	11.52	M vs. C11.96	2.54**	0.000

** $p<0.01$, * $p<0.05$

The analysis of variance for religion on the score on the measure of psychological health revealed the religion causes significant variance in the status of psychological well-being of the participants of the three religions communities.

Further analysis indicated that the participants belonging to three religious groups differ in their diagnosing patterns ($F=2.98$, $P<0.02$). Hindus adopted significantly more realistic and objective approach in diagnosing the symptoms

of ill health in comparison to Muslim participants. However, no significant difference could be noted between Hindus and Christians in this regard. ANOVA revealed significant variation in diagnosing pattern of the participants belonging to three communities.

TABLE-3
Comparison of Three Religious Groups with regard to their Diagnosing Pattern

Religious Groups	N	Mean	SD	Post-Hoc Tuckey Test		
				Mean Diff.	Std. Error	Significance
Hindu (H)	123	14.17	3.18	H vs. M- 0.99	0.42	0.04
Muslim (M)	91	15.16	2.84	H vs. C- 0.30	0.57	0.82
Christian (C)	36	14.47	2.81	M vs. C 0.69	0.59	0.47

Comparison of three sub-groups with regard to their adoption of the action and recovery from illness did not reseat significant differences ($F=2.9$, PCO_2 , $F= 2.28$, $P<0.01$ respectively).

The results suggest that the three religious groups did not significantly differ from each other in their approach to cure and adherence to treatment.

The study concludes that religious-association and religion-specific culture play significant role in determining health status, physical as well as psychological of the people in different communities. However, people belonging to different communities adopt more or less similar patterns of responses to illness.

DISCUSSION

The results of the present study suggest that Christians manifest marked fewer symptoms of physical and mental ill health as compared to Hindus and Muslims. Hindu and Muslim samples did not significantly differ with regard to their health status. However, Hindus maintained better psychological health than Muslims did. Here the observed difference in health status of the three religious groups may be attributed to their affiliation with a particular religion and specific religious practices, rather than to the religiosity. The religious practice is significant component of the larger concept of religion. The results of the present study may be specifically attributed to religion-specific cognitive patterns, attitudes, philosophy and beliefs, values, culture, behavioural pattern, life style and many other characteristic features of the different religions.

Religion influences health of people in two ways – firstly, the religion-specific psychological and behavioural characteristics, behaviour patterns and habits, dietary habits and life style, cognitive patterns, attitudes and beliefs of the follower of a religion largely influence their health behaviour and in turn health status, and secondly, religion may also be viewed as a mode of coping with life challenging situations. Institutional practices provide social support, which buffers

the effects of stresses of life. The findings of the present study regarding cross-religion differences in health status may be attributed to the differences in cognitive sets, beliefs and values, behavioural patterns, habits, life style, dietary habits, and religious practices of Hindus, Muslims and Christians. The degree of rigidity, flexibility, openness and tolerance for others in the religion also put significant effect on psychological and physical health- state of its followers. Christians in general are more cautious about hygiene, sanitation and health and consequently take more precautionary measures in their day-to-day life to prevent health problems, and show comparatively more adherence to treatment in case of illness. Moreover, their religious practices are more scientific and reality oriented than that of Hindus and Muslims. Besides, their belief- system in general and health belief system in particular are relatively more objective and scientific. Christian religion is considered to be more flexible and open while Muslims and Hindus religions are relatively rigid, intolerant and close. The results of the present study may partially be explained in the light of above-mentioned features of the three religions. Relatively lower economic status and education level of Muslims in general particularly in India may also be held responsible for their relatively lower health status.

Difference in health belief system of the three religious groups also may be attributed for causing difference in health status of the three groups. This model argues about the belief people hold regarding a health condition or behaviour that in turn determine their action about it. The health belief-system the person holds determines his perceived cause of and susceptibility to develop the illness and the perception of the severity of the illness and its consequences. The perceived effectiveness or negative consequences of the action adopted for cure is also determined by health- beliefs system. This system also provides cues that alter the likelihood of perceiving a threat and taking actions. The health belief model is considered as a systematic approach to explaining and predicting preventive health behaviour, sick role, and illness behaviour. It may be generally observed that certain prescriptions and proscriptions laid down by religions puts positive/negative effects on health of its followers. Certain specific features and certain aspects of religious practices help improving health while some others make the followers susceptible to certain types of health problems. Alber Ellis has accordingly expressed the view that 'devout, orthodox or dogmatic religion significantly correlate with emotional disturbance, so to health problems'.

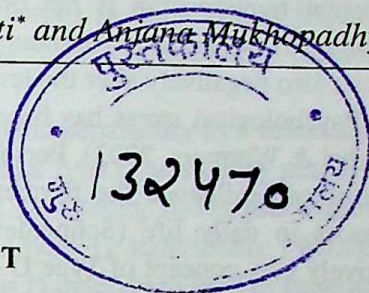
However, the perspectives have changed to reset the view on religiosity and religious practices as marker of good mental and physical health. Apart from this, most non-western cultures have the system for mental health care that are developed within religious framework. This is true especially in the context of developing modern psychological systems within the framework of Islam, Judaism, Buddhism and Hinduism.

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EMOTION REGULATION, RUMINATION AND QUALITY OF LIFE: A COMPARISON OF TYPE D AND NON-TYPE D HYPERTENSIVE PATIENTS

Das Ambika Bharti* and Anjana Mukhopadhyay**



ABSTRACT

In the area of Cardiovascular Disease, Essential Hypertension represents a very common chronic disease that can negatively alter the level of well-being. No specific medical cause, but psychological and physiological response to stress has been implicated in its development. Type D personality, which is described as the tendency to experience a high joint occurrence of negative affectivity and social inhibition, has been found to be more prevalent in hypertensive patients. Rumination plays a role in the association between emotion inhibition and development of hypertension by prolonging the psychological and physiological arousal that accompanies stress. Type D personality is a vulnerability factor not only for adverse clinical prognosis, but also for increased distress and impaired Quality Of Life (QOL). Present study is aimed to compare type D with non-type D hypertensive patients with respect to quality of life, emotion regulation and ruminative thought style. The tools used in the study are DS 14, WHOQOL (BREF), Ruminative Thought Style Questionnaire and Emotion Regulation Questionnaire. The sample comprised of 40 diagnosed hypertensive patients categorized into type D and non-type D groups. Results showed that type D hypertensive patients were significantly lower from their non-type D counterparts in psychological dimension of QOL. The two groups however did not differ significantly with respect to expressive suppression, which has the least discriminatory power. The

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study emphasised the need of a befitting intervention for type D hypertensive patients to improve their psychological QOL as well as to reduce expressive suppression among hypertensive patients irrespective of their personality type.

Keywords: Hypertension, Type D personality, Emotion Regulation, Ruminative Quality of Life

Essential hypertension, referred to as high blood pressure (BP ≥ 140 mm Hg), is a medical condition in which the blood pressure is chronically elevated and no specific medical cause can be found to explain this condition. Persistent hypertension is not only one of the risk factors for stroke, heart attack, heart failure, arterial aneurysm and leading cause of chronic renal failure but can also negatively alter the levels of well-being.

Psychological stress has been related to an increased risk of hypertension (al'Absi & Wittmers, 2003). Personality is a major determinant of chronic stress since it can influence the frequency, magnitude, and duration of exposure to stressors in daily life (Schneiderman, Ironson, & Siegel, 2005). Of late, a relatively new concept of Type D (Distressed) personality has been identified as the predictor of prognosis in CHD patients (Denollet et al., 1996). Type D individuals tend to (a) experience negative emotions (Negative Affectivity, NA) and (b) inhibit self-expression in social interactions (Social Inhibition, SI). Evidence suggests that NA is an important determinant of subjective well-being and emotional distress in CHD patients (Denollet, 1991) and is a source of increased vulnerability to anxiety and depression (Watson, Clark, & Harkness, 1984). Similarly, SI has also been associated with high negative emotionality and personal distress (Gest, 1997). Particularly high SI individuals display physiological hyperactivity under conditions of social engagement (Habra, Linden, Anderson, & Weinberg, 2003). While these findings may possibly explain why individuals from the general population with a Type D personality experienced more symptoms of distress, depression and anxiety compared to non-Type D's (Polman, Borkhuis, & Nicholls, 2009). O'Connor, O'Connor, & Marshall, (2007) linked distress to a ruminative response style, the possible cognitive vulnerability activated by negative or stressful life events. Ruminative individuals repetitively focus on their depressive thoughts, as well as the causes of these thoughts, but usually fail to take action to change their condition (Carver, Scheier, & Weintraub, 1989). Gerstner et al.'s (2006) *Rumination Arousal model* also posits that rumination plays a role in the association between exaggerated cardiovascular reactivity and development of hypertension (Treiber et al., 2003) by prolonging the psychological and physiological arousal that accompanies stress (Key, Campbell, Bacon, & Gerstner, 2008). In other words, by delaying cardiovascular recovery following negative emotions, rumination may help to explain the association between negative emotions in particular and episodes of sustained BP elevations that may precede the development of hypertension (Brosschot & Thayer, 2003).

Similarly, emotional coping strategies, such as wishful thinking, minimisation of threat or emotional suppression were also found to be associated with increased BP (Theorell, Alfredsson, Westerholm, & Falck, 2000). Polman, Borkoles, and Nicholls, (2009) found that individuals with a type D personality tend to use more passive and maladaptive avoidance coping strategies, which are associated with higher levels of perceived stress and burnout symptoms. Thus, it is evident that emotion expression style has important implications for the effects of negative emotionality on physiological processes. Moreover, *A Process Model of Emotion Regulation* (Gross, 1998) also suggests that adjustment made early (reappraisal/ antecedent-focused emotion regulation) in the emotion trajectory are more effective than adjustments made later on (suppression/ response-focused emotion regulation).

Pedersen and Denollet, (2003) reported type D personality as a vulnerability factor for impaired quality of life. Individuals with a Type D personality manifested more symptoms of mental distress (Van Hiel & De Clercq, 2009), and exhibited higher feelings of subjective stress than non-type D individuals (Williams, O'Carroll, & O'Connor, 2008.). The fact that type D individuals tend to experience interpersonal situations as being stressful may also have direct biological effects that may afflict on the cardiovascular system. Accordingly, type D personality is a vulnerability factor not only for adverse clinical prognosis, but also for increased distress and impaired quality of life (QOL).

The present study purports to compare hypertensive patients of type D and non-type D personality in the light of emotion regulation, rumination and quality of life (QOL). Type D personality is more prominent among hypertensive than in CHD patients. The generation of knowledge is essential for further understanding the difference between type D personality and non-type D personality with respect to emotion regulation strategies used, rumination and QOL among hypertensive patients that could help in framing effective intervention program for this population. The objectives of the study were:

1. To compare hypertensive patients classified as type D and non-type D with respect to emotion regulation strategy used by them, their level of rumination and the multiple aspect of their quality of life.
2. To find out which of the variable would best discriminate between the two groups of hypertensive people?

The following hypotheses were proposed:

Hypothesis 1: Type D hypertensive patients would show greater rumination, impaired quality of life and make lesser use of cognitive reappraisal.

Hypothesis 2: Psychological domain of quality of life would show maximum discriminatory power to differentiate type D from non-type D hypertensive patients.

METHOD

Sample

The sample comprised of 40 hypertensive patients classified as type D (N=20) and non-type D (N=20) with B.P. above 140/90 mm Hg. The patients were registered in the OPD of Cardiology Division, IMS, BHU. They had documented diagnosis of Hypertension and were on anti-hypertensive drugs.

Tools

The Type D Scale (DS14: Denollet, 2005)

DS14 is a 14-item measure of Negative Affect (NA) and Social Inhibition (SI). The 7 NA items cover feelings of dysphoria, worries and irritability; the 7 SI items cover discomfort in social interactions, reticence and social politeness. Items are answered on a 5 point Likert scale (0 = false, 4 = true), with NA and SI sum scores ranging from 0 to 28. The NA and SI scales are internally consistent ($\alpha = 0.88/0.86$), stable over a 3 months period ($r = 0.72/0.82$), independent of mood or health status (Denollet, 2005).

The Emotion Regulation Questionnaire (ERQ: Gross & John, 2003)

ERQ is comprised of ten statements divided into two regulation strategies: cognitive reappraisal and expressive suppression. Responses are based on a 7 point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Reliability is reported as 0.79 for reappraisal and 0.73 for suppression.

The Ruminative Thought Style Questionnaire (RTS: Brinker & Dozeman, 2009).

The final scale consisted of 20 items describing possible facets of global rumination. It is a self rating scale with the response pattern ranging from 1 (not at all) to 7 (very well), maintains a reliability coefficient of Cronbach's alpha for the 60 item pool to be 0.95.

WHO-Quality of life-BREF (WHOQOL-BREF) (WHO, 1996)

The WHOQOL-BREF comprises of 26 items, which measures the following broad domains: physical health, psychological health, social relationships and environment. The items are answered on a 5-point Likert scale ranging from 1 (very poor) to 5 (very good).

Procedure

Respondents were contacted individually in the outpatient department of Cardiology of Sir Sunderlal Hospital, Banaras Hindu University, Varanasi. They were classified as of type D and non-type D personality on the basis of their scores on DS 14 scale. They were assured that their responses would be kept confidential.

confidential and used for research purpose only. Data were collected by administering the three selected questionnaires. Completed questionnaires were collected and scored as per the manual for further analysis.

RESULTS

The descriptive statistics (Mean & SD) were computed for the scores obtained on the two emotion regulation strategies, that is, Cognitive reappraisal and expressive suppression, rumination and the four domains of quality of life, namely, physical, psychological, environmental and social relationship. Between groups, comparisons were done using ANOVA. Two groups Discriminant Functional Analysis were obtained by using Statistical Package in Social Sciences (SPSS) version-16 for assessing the discriminatory power of each variable chosen.

TABLE-1

Descriptive statistics and F values for the two emotion regulation strategies, rumination and multiple domains of QOL for Hypertensive patients classified as Type D and non Type D

Variables	Personality type	N	Mean	Std. Deviation	Std. Error	F Value
Physical Health	Type-D	20	21.40	3.604	0.806	20.107**
	Non-type D	20	26.85	4.069	0.910	
Psychological	Type-D	20	16.70	3.771	0.843	22.231**
	Non-type D	20	22.45	3.940	0.881	
Social Relationships	Type-D	20	10.30	1.867	0.417	8.289**
	Non-type D	20	13.00	3.756	0.840	
Environment	Type-D	20	24.85	5.102	1.141	7.782**
	Non-type D	20	29.65	5.761	1.288	
Cognitive Reappraisal	Type-D	20	24.10	7.799	1.744	8.619**
	Non-type D	20	30.25	5.190	1.160	
Expressive Suppression	Type-D	20	17.05	7.897	1.766	0.633
	Non-type D	20	18.75	5.379	1.203	
Ruminative Thought Style	Type-D	20	106.25	20.357	4.552	15.281**
	Non-type D	20	79.00	23.611	5.280	

**p<0.01

Table-1 shows the mean, SD and F values of type D and non Type D hypertensive patients on the four domains of quality of life, cognitive reappraisal, expressive suppression and rumination. The overall trend shows higher scores for non type D hypertensive patients on all the four domains of quality of life as well as on the two emotion regulation strategies but as far as rumination is concerned, type D patients scored higher compared to their non-type D counterparts. The F values show that two groups differ significantly ($p<0.01$) with respect to all the variables except expressive suppression, the non adaptive

emotion regulation strategy, hence expressive suppression will not be considered in further analysis. Hypothesis 1 thus stands in full support with the result.

To ascertain the contribution of each predictor variable in this discriminant analysis, the two-group discriminant functional analysis was applied.

TABLE-2

Structure Matrix: Pooled within-groups correlations between discriminant variables and standardized canonical discriminant functions

Variables	Function 1
Psychological QOL	0.656
Physical QOL	0.624
Ruminative Thought Style	-0.544
Cognitive Reappraisal	0.408
Social Relation	0.400
Environment	0.388
Expressive Suppression	0.111

Table-2 suggests that psychological quality of life probably has the most discriminatory power to differentiate between type D and non-type D and hypertensive people bringing complete support to Hypothesis 2. Psychological domain is closely followed by physical quality of life. Rumination occupies the third position in terms of discriminatory power. Cognitive reappraisal, social and environmental quality of life comes thereafter.

TABLE-3

Classification Function Coefficient: Fisher's linear discriminant functions assign cases to groups

Variables	Personality Type	
	Type D	Non-type D
Physical Health	1.439	1.485
Psychological health	1.098	1.538
Social Relation	0.772	0.871
Environment	0.321	0.308
Cognitive Reappraisal	1.227	1.412
Expressive Suppression	0.054	0.171
(Constant)	-74.367	-89.091

Table-3 shows that coefficient for physical, psychological and social QOL and cognitive reappraisal is smaller for the personality type D classification, which means that hypertensive people those who are high or will score more on these variables are more likely to belong to the non type D personality type. The table also indicates that type D hypertensive people would score high on ruminative thought style and would be better in their environmental QOL.

TABLE-4

Classification Result: Percentage of Cases correctly classified as per the discriminant model (Wilks' Lambda = 0.424 at 0.01 level)

%	Personality type	Predicted Group Membership		Total
		Type D	Non-type D	
Original %	Type D	95.0	5.0	100.0
	Non-type D	20.0	80.0	100.0
Cross-Validated %	Type D	80.0	20.0	100.0
	Non-type D	25.0	75.0	100.0

- In cross validation, each case is classified by the functions derived from all cases other than that case.
- 87.5% of original grouped cases correctly classified.
- 77.5% of cross-validated grouped cases correctly classified.

The classification table shows the practical results of using the discriminant model which is significant (Wilks' Lambda=0.424) at 0.01 level. Overall 87.5% of original cases processed and 77.5 % cross-validated grouped cases are correctly classified.

DISCUSSION

The present study aimed to compare hypertensive patients of type D and non-type D personality with respect to emotion regulation, rumination and multiple domains of QOL. It is important to mention that the results of the study appear to lend substantial support to the hypotheses formulated. Hypertensive patients of type D personality have shown greater rumination, impaired quality of life and lesser use of cognitive reappraisal than their non-type D counterparts. The two groups but, did not differ significantly with respect to expressive suppression. This finding potentially indicates that expressive suppression or emotional inhibition in particular is associated with increased cardiovascular reactivity (Gross, 2002), decreased cardiovascular recovery (Brosschot & Thayer, 1998), decreased heart rate variability (Horsten et al., 1999) and in the long term, carotid atherosclerosis and hypertension (Jorgensen et al., 1996). Thus, expressive suppression may be a potential predictor of hypertension irrespective of personality type.

The study also aimed to find out which of the variables would best discriminate between the two groups of hypertensive people. Type D hypertensive patients, classified in terms of function coefficient, are found to be high on rumination, showed impaired QOL in the psychological, physical and social domains of QOL leaving the environmental and made lesser use of the adaptive emotion regulation strategy of cognitive reappraisal. This is in line with earlier studies related to the above variables. Type D personality experienced more symptoms of distress, depression and anxiety compared to non-Type D's (Polman et al., 2009). Also people with a type D personality more often reported mental

health disorders (Oginska-Bulik, 2006) as well as lower levels of social support (Williams et al., 2008,) compared to non-Type D adults. Individuals with a Type D personality tend to use more passive and maladaptive avoidance coping strategies, which are associated with higher levels of perceived stress and burnout symptoms (Polman et al., 2009).

In corroboration with the third hypothesis, psychological QOL came out to be having the most discriminatory power among the lot and thus is the best discriminator for type D and non-type D hypertensive patients. Individuals with a Type D personality manifested more symptoms of mental distress (Van Herck De Clercq, 2009), and exhibited higher feelings of subjective stress than non-Type D individuals (Williams et al., 2008).

CONCLUSION

A conclusion thus may be derived based on this investigation that for hypertensive patients if reflecting Type D personality must be given some better intervention so that the psychological quality of life of the patients may not deteriorate. In the counselling practice, the ruminative thought style must be discontinued and a cognitive reappraisal coping technique may be reinforced and rely upon.

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EMOTIONAL INTELLIGENCE IN RELATION TO SELF ESTEEM

*Meera S. Neelakantan**

Self-esteem has been described as the affective or evaluative appraisal of the self; in other words, how much a person likes or dislikes his or her self (Baumeister, 1993). "Sooner or later, those who win are those who think they can"- Richard Bach. This is exclusively relevant while we say something on self-esteem. Self-esteem is appreciating one's own worth and importance having a character to be accountable for oneself and to act responsibly towards others.

Studies have conducted relating self-esteem and adult happiness where it concluded that higher self-esteem increases the general happiness level (Silick & Schutte, 2006). The present research focuses on relating self-esteem and emotional intelligence and examining to what extent self-esteem can be a predictor of Emotional Intelligence.

Emotional intelligence is the ability to accurately identify and understand one's own emotional reactions and those of others, consisting of the ability to control one's emotions and to use them to form good decisions to act purposefully and to involve effectively in a given situation. "Emotional Intelligence refers to the capacity of recognizing one's own feelings and those of others, for motivating ourselves and in our relationships". (Goleman, 1998). In recent times, there has been much interest in the construct of Emotional Intelligence as a set of abilities relating to regulation of emotions and processing of information. Emotional Intelligence does not include any regulation but also perception and management of emotions.

The present study aims to study the relationship between self-esteem and emotional intelligence. The sample comprises of 80 undergraduate students who study in an autonomous college in coimbatore. The instruments used are (i) Emotional Intelligence Questionnaire, (ii) Self-esteem scale (Rosenberg, 1965).

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The present study found significant positive correlation between self esteem and emotional intelligence ($r=0.793$, $p<0.01$). From the findings, it can be inferred that people's self-esteem enhances their emotional intelligence. The findings of the present study are in consistency with findings of Country & Chester (2005). The study was conducted with a small sample. Differences may exist in different locales. Nevertheless, the findings are notable and supported by past results. An important task for future research is to examine the relationship between self esteem and productivity, creativity and health.

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A COMPARATIVE STUDY OF STRESS AMONG NURSES WORKING IN PRIVATE AND GOVERNMENT HOSPITAL

*Jeetendra K. Pansuriya**

Nurses are valuable assets to the medical profession. They perform basic medical tasks that allow doctors to concentrate on more complex procedures and diagnoses. This results in more efficient care since the doctor doesn't need to be tied up seeing every single patient for every condition. Nurses can work in either public or private hospitals. Public hospitals are owned by government agencies and get funding primarily through taxes and other government contributions. Private hospitals are profit-oriented hospitals that are owned by a single practitioner or organisation and are funded by the patients themselves. Nurses who work in private hospitals face a number of problems:

Pay: Nurses who work in the private sector earn less than nurses in public hospitals do. This disparity has been a focus of the NSW Nurses' Association (NSWNA), which works for nurses' rights. As many as 70 per cent of private nurses listed parity of pay as the highest priority in talks with employers in a 2008 survey by the NSWNA. However, there is evidence that pay disparity may be decreasing between public and private nurses; the website simplyhired.com, says that the average salary for a private nurse was \$2,000 more than that for a public nurse. Pay also varies based on location and the employer.

Workload: Public nurses tend to work less than those who are in the private sector. In the 2008 NSWNA survey, a third of respondents reported that their private hospital was understaffed and 61% worked overtime without compensation.

Competence: Because private hospitals tend to be understaffed, private nurses may feel pressurised to perform medical tasks or procedures in order to keep their jobs, even if they do not have the competence or training necessary.

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Nursing frontiers: 'Accountability and the Boundaries of Care', discussed this issue and explained that many nurses are thrown into roles for which they are not prepared, and which may put the patient at risk. Walsh reported that strategies to help nurses solve this issue are not readily available in most nursing environments.

Stress: Problems such as having to work unpaid overtime and being expected to perform tasks outside their training, cause private sector nurses to experience a good amount of stress. Tankha (2006) reported that private nurses scored higher than government nurses on eight out of 10 dimensions of the Organizational Role Stress Scale and that private male nurses were more stressed than private female nurses.

Considerations: Despite the problems facing private nurses, private nurses who participated in the 2008 NSWNA survey also revealed that there are reasons to stay in private nursing, particularly in the field of increased worker camaraderie. Additionally, the NSWNA is lobbying on behalf of private nurses for improved pay and improvements in workloads, as well as for parental leave. If successful, the NSWNA will reduce the amount of disparity between private and public nurses and will increase job satisfaction.

METHOD

Problem

A comparative study of stress among nurses who working in private and government hospital

The present study attempts (i) to measure the level of stress among nurses working in private and government hospital and (ii) to compare the level of stress between nurses working in private and government hospital.

To measure the level of stress among nurses who working in private and government hospital total number of 30 nurses were working in private hospital and 30 nurses were working in government hospital were randomly selected from Rajkot district. For the purpose of data collection the nursing stress index which was developed by Adenocon O. Thekeso and Hilin O. Osinoyo was used to measure the stress level among nurses. t test was used to the statistical analysis of the data.

The results show that mean stress of 30 nurses working in private hospital was 37.40 and SD was 4.92; similarly, mean stress of 30 nurses working in government hospital was 45.30 and SD was 5.18 and significant mean difference was obtained ($t=5.80$, $p<0.01$). This implies that the level of stress is more in nurses working in private hospital as compared to government hospital.

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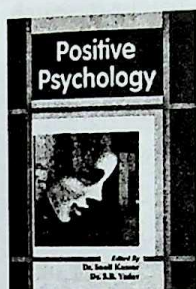
BOOK REVIEW

POSITIVE PSYCHOLOGY

Edited by Dr. Sunil Kumar and Dr. S.B. Yadav,

2011 Global Vision Publishing House, New Delhi

Rs. 2000/- \$ (US) 100, ISBN: 978-81-8220-414-0, pp.: 329.



The book entitled "Positive Psychology" is a diligent team effort. Sincere appreciation goes to the editors of this book. The emergence of positive psychology is not just the result of scientific expedition done in the last few years but a need of present day scenario, where the lifestyle of people is leading to selfishness and alienation between the more and the less fortunate and eventually to chaos and despair. The book is an effort to make positive psychology accessible to research scholars by reviewing and summarizing the recent

empirical findings and theories within the major areas (with special reference to corporate world) of positive psychology.

The book has incorporated 33 articles / research studies, classified in six parts, dealing with emerging trends in positive psychology such as happiness, hope, emotional intelligence, character strengths, kinship, success, spirituality and well-being etc. It also focuses on negative states of life such as stress, depression, conflict, emotional and behavior problems etc. The book begins with the focus on the nature of positive psychology and critically evaluates while raising the doubt about its emergence and sustainability, the same could have been avoided. Part II, highlights the notion of emotional intelligence and the role of culture in determining emotional intelligence. This review aptly pinpoints the need of cross-cultural research on assessment of emotional intelligence. Because international workforce is becoming more heterogeneous and the workplace more multicultural. Nodoubt, all cultures classify emotions either pleasant or unpleasant such as pride is considered positive emotion in western culture, on the contrary it is treated as unpleasant in India. So the mono-

centered instruments (i.e. from a single western cultural background) fail to serve the purpose of generalization, hence are more likely to face bias problems. So the need of the time is to reduce ethnocentrism in emotional intelligence instruments and to design better "culturally tuned EI development programs". Further this section describes the positive impact of yoga practice on emotional and behavioral problems. Part III relates to organization and management with emphasises on positive emotions and environment. It has empirically proved in a research study entitled "positive emotions in organization" that open and verbal appreciation in organization is infrequent and negligent domain in the organizational culture. In the Indian work scenario, the emphasis is on the appreciation of team performance than appreciating an individual contribution which leads to dampen positive emotions and affects performance and efficiency. Interestingly it has been reported that those immersed in organizational life find it hard to associate emotions with the corporate world as it has been suggested that organizations are "emotionally anorexic" (i.e. people are expected to leave their feelings at home when they go to work). Some of the articles/research studies covered in part IV do not appear to be in congruence with its title. As they dealt with occupational stress, depression, role conflict, emotional and behavior problems. Meanwhile this section also highlights the techniques of management of stress such as deep breathing, exercise, relaxation, cognitive therapy, laughter, guided imagery, time management and music therapy etc. Part V is devoted to describe self and its awareness, spirituality and provides guidance to enhance productivity which ultimately leads to success. While part VI talks about quality of life, lifestyle and its impact on health. It also suggests life style intervention program which leads to adolescent's wellbeing while facilitating their levels of hope/optimism via changing their quality of life. This part also reflects one of the most sacred institutions of society-the institution of marriage where the meaning of marriage from the Vedic perspective has been well elaborated. The idea to pursue the "the good life" rather than "goods life" is beautifully presented. Both part V and VI offer useful and enriching content for the readers.

Overall, the book provides a valuable and pertinent material to the research scholars conducting research in the field of positive psychology. The better organization and classification of chapters is recommended. The book is worth buying for university library.

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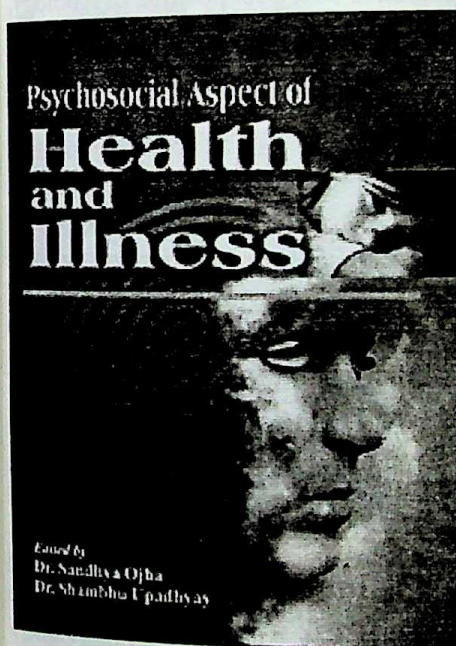
BOOK REVIEW

PSYCHO-SOCIAL ASPECT OF HEALTH AND ILLNESS

Editors: Sandhya Ojha and Shambhu Upadhyay

2010, Global Vision Publishing House, New Delhi

Rs.2500/- \$(US) 125 ISBN: 978-81-8220-315-0, Pages: 414



The edited book is a joint effort of many social scientists to account for the psychosocial aspects of health and illness. Health and illness is a concern which is universal. It may be faced by every one during his life time. Health is aspired by each of us and at the same time every one is fearful of illness. It is true that medical sciences has shown excellent progress but it is also not untrue that state of illness has not improved up to the expected extend. One of the most significant reasons may be that the medical model is not sufficient to cure the illness and to promote health. Keeping the inadequacy of the medical model in view, the significance of such valuable

documents becomes manifold. Psychosocial factors are potent enough (demonstrated successfully in many chapters of the books) to produce noticeable changes in the health conditions.

There are 36 important chapters classified under five distinctive sections. First section deals with Bio-Psychosocial and Ecological perspective on health and illness. Different chapters provide sufficient theoretical as well as conceptual

background along with some relevant empirical support for particular disease system. For example chapter 2 highlights the role of biogenic amine neuroendocrine system, CNS etc. in mood disorders with pertinent research. Second section is developed to the study of stress, coping, health risk behavior and illness. There are nine chapters in this section and each one of them addresses a new theme. The most significant fact reflected through this section is that stress is inevitable but one has to learn to manage and cope with it effectively. With positive coping strategies one can even manage chronic illness. Third Section is committed to organizational concerns where four articles discuss various job related issues particularly relating to the Indian scenario in a comprehensive manner, where IT sector dominates among the present employees. Fourth section examines the role of religiosity and spirituality in health. Indian classification of personality based on Tirguna has been found to have similarities with dimensions of emotional intelligence thereby resulting in possibilities of promotion of one by the enhancement of another.

Last section enlists those chapters which provided some health intervention and management strategies. A variety of programmes based on positive psychology, self efficacy, yoga-sutra etc have successfully demonstrated their encouraging role in health promotions. Incorporation of wide range of variables, sampling tools in the research articles and comes have increased the importance of the book for even the general reader. The efforts of the editors to bring the volume in a standard manner are appreciated. The language is easy to comprehend and quality printing is the added feature of the book. Analytical views of C.B.Dwivedi in the form of the foreward of the book are motivating for the entire health professional community not only in dealing with illness but also to spread positive health here, there and every where. Editors/ and publisher are complimented on the endeavor and it is hoped that similar efforts will bear fruit in future.

Dr. Amrita Yadav
Professor of Psychology
M.D.University, Rohtak

BOOK REVIEW

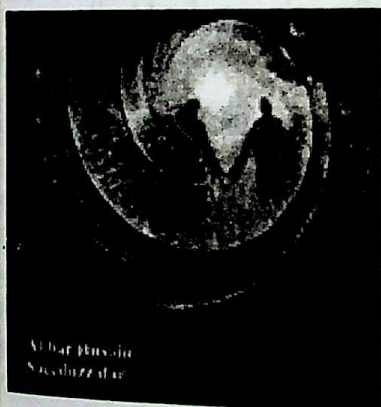
SPIRITUAL VIRTUES AND HUMAN DEVELOPMENT

Prof. Akbar Husain & Prof. Sayeeduzzafar

2011, Global Vision Publishing House, New Delhi

Rs. 700/- \$ (US) 40, ISBN: 978-81-8220-436-2, Page 168.

Spiritual Virtues and Human Development



The book entitled "Spiritual virtues and Human Development" has been authored by Prof. Akbar Husain and Prof. Sayeeduzzafar of Aligarh Muslim University. The book contains 7 main chapters dealing with spirituality in various walks of life. The concept of spirituality has been scientifically described, which would help professionals, academicians, parents and social workers. The focus is on spiritual values and basic tenets of Islam. Unhealthy behaviour pattern of individual is generally the product of poor knowledge regarding holy principles of Islam depicted in Holy Quran and Hadith.

The book contains seven main chapters which altogether elaborates these principles in a highly meaningful and broader

perspective. These chapters are Spirituality in Islamic Traditions, Spiritual Virtues and Holistic Development, Spiritual Virtues and Islamic Leadership, Spiritual Virtues and Personal Social Harmony, Non-violence in the Quran, Spiritual Virtues and the Development of Identity, Spiritual Virtues and Happiness. In each of the chapters spirituality has been well discussed in the light of Islam and also its impact on different types of human behavior and social processes which contribute to real happiness to the individual and pave the way for happy and harmonious living and the resulting contentment as well as reliance on God.

If these principles and virtues are better understood and propagated by the experts in the field of spiritual psychology and by dedicated readers. It will help

Journal of Indian Health Psychology

in appreciating their impact in maintaining harmonious human development attaining the real goal of socialization. The book also deals with the aspects of non-violence and their eradication through spiritual thinking and in Islamic virtues.

We need a better understanding of virtues based on Islamic teaching. Virtues are to be discovered by an effective method which is important in individual and social living. These spiritual virtues are to be inculcated and will help the individual in understanding its relationship to spiritual well-being. The authors have emphasized on the need of developing intervention techniques to inculcate spiritual development in adolescents. On the whole, if we examine various virtues in the development of identity of individual, the spiritual virtues like, gentleness, goodness, honesty, humanity, justice, peace, self-sacrificedness, thoughtfulness, tolerance and forgiveness, truthfulness are virtues which do not only belong to Islam but are universal in nature. All virtues are meant for a meaningful life and healthy identity. These virtues lead us closer to God.

The book, thus, heavily deals upon the fundamental virtues (pg-135). Readers and Researchers can elaborate the Quranic Virtues from the broader perspective but it basically stresses the virtues which guide day-to-day life and which have been revealed by God in Holy Quran. Living according to Quranic teaching and the prophetic tradition is the only way for Muslim parents to develop the identity of their children as it will help them in leading a life of peace, justice, righteousness and unity.

In short, the emphasis is on clarifying the basic principles which emphasize that human beings are spiritual beings.

In the light of above discussion on the fundamental of above book "Spiritual Virtue and Human Development", the authors have reflected their deeper insight and faith in Quranic and Prophetic teachings and further their thoughtful understanding of human behaviour, as they are professors of Psychology. The book contains 151 pages. The printing of the book and the quality of paper and the get-up of the book will also attract the readers to go through it. The Global Vision Publishing House is to be credited.

Lastly, I can simply say that Prof. Akbar Husain has once more reflected his talent and interest in his present book like his other publications 'Horizons of Spiritual Psychology', 'Explorations in Human Spirituality', 'Islamic Psychology', 'Spiritual Psychology' and Twenty-First Century Psychology of Spirituality, Behaviour and Wellness. This shows his special and dedicated insight in the basic tenets of Islam and fundamental principles of human behaviour. I can simply say that the combined effort of Prof. Akbar Husain and Prof. Sayeeduzzafar is to be acknowledged.

Prof. Shamshad Husain
Professor Emeritus, Patna University

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PSYCHOPATHOLOGICAL DISORDERS

Biopsychosocial Analysis

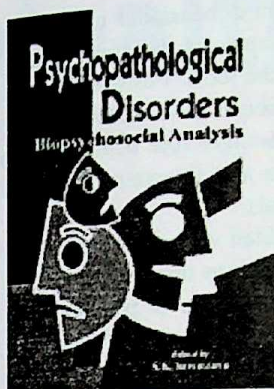
Edited by S.K. Srivastava

2012 pp xiv + 346, Rs. 2500/- \$ (US) 125, Size 6×8 ISBN: 978-81-8220-469-0

About the Book

Psychological disorders are patterns of behavioural or psychological symptoms that impact multiple areas of life which creates distress for the person experiencing these symptoms. The term psychopathology may also be used to denote behaviors or experiences which are indicative of mental illness, even if they do not constitute a formal diagnosis. In present book, 34 research papers are contributed by noted scholars of psychology which has been classified into five parts. The first part of this book has been devoted eight papers to psychopathological disorders and its application of therapeutic interventions. Second part includes nine papers which deals with the psychosocial disorders and interventions. Disorder and retardation is described in the third part and fourth part deals with quality of life, health and happiness. Last part of this book is devoted to

Anxiety and Depression. Editor gratefully acknowledge the support rendered by the respective authors for their valuable contributions.



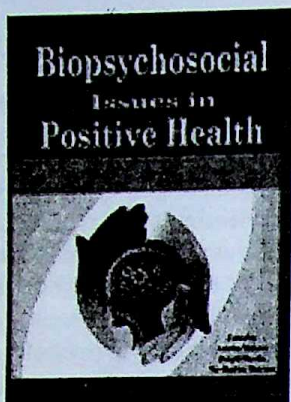
About the Editor

Dr. S.K. Srivastava is presently working as a Professor & Head in the Department of Psychology at Gurukul Kangri University, Haridwar. Dr. S.K. Srivastava received his Ph.D. degree in Psychology (Department of Humanities and Social Sciences) from I.I.T. Roorkee, his field of specialization being Industrial/Organizational Psychology. He owned National Scholarship for postgraduate course and U.G.C. Research Fellowship. He also has served as Lecturer in Psychology in the Department of Higher Education, Haryana for three years, and since 1986 he has been a faculty member of Psychology Department at Gurukul Kangri University, Haridwar.

Dr. Srivastava is associated with various academic bodies in the field of Psychology and Management.

Dr. Srivastava has supervised research work leading to award of twenty-two Ph.Ds. and sixty master degrees. He has contributed more than hundred research papers and articles to various journals in India and abroad. He has to his credit six books, three conferences proceedings and six psychological instruments, which are widely used in psychological and social research. Dr. Srivastava has completed four research projects sponsored and financed by ICSSR and UGC New Delhi. He has organized three conferences at National and International levels in Gurukul Kangri University, Haridwar.

BIOPSYCHOSOCIAL ISSUES IN POSITIVE HEALTH



*Editors Amrita Yadava, Deepti Hooda and
NovRattan Sharma*

2012, 2,200/- \$(US) 110 978-81-8220-491-1

ABOUT THE BOOK

Undoubtedly health is a multidimensional concept certainly much more than the absence of diseases. Although Health is itself a positive state but the term "Positive Health" is also not uncommon. Health professionals have started to believe that positivity plays a definitely stronger role than negativity particularly in fighting off diseases and integrating the best promotive strengths of the individuals.

The present book has been edited with this very objective in mind. There are total 26 important articles have been classified into three broad sections. First section consists of eight articles dealing with the nature and theory of positive health. The second section comprises of eight articles reflecting more a data based and empirically demonstrated determinants and contributors of positive health. The third section focuses on the intervention and application part. Different intervention strategies are being spelled out with sufficient supporting evidences. The compilation is a serious effort to assimilate the research and practice of biopsychosocial approach in positive health. The Editors are quite hopeful that the theoretical, conceptual, empirical and analytical endorsement in the book will be a great source of knowledge as well as research ideas alongwith some effective intervention programmes.

ABOUT THE EDITORS

Amrita Yadava is presently working as professor of psychology at M.D. University, Rohtak. She is actively involved in teaching, research and extension work more than 30 years. More than 70 research articles have been published by her in reputed journals and books. She has also edited six books on important areas of psychology. Her research dominantly relates to application of psychology in areas such as guidance, counseling, health and working sectors. She has been facilitated by Gurukul Kangri University, Haridwar for her outstanding and exemplary contributions in the field of psychology. Presently, Dr. Yadava is Director, Women's Study Center, M. D. University, Rohtak.

Deepti Hooda is working as assistant professor in the department of psychology, M.D. University, Rohtak. She has 5 years of P.G. teaching experience. She has published more than 11 papers in different international/ national journals and edited books. More than 25 papers have been presented in various national and international conferences/seminars at various institutes of India. Dr. Deepti is rigorously pursuing teaching, research and extension activities in the area of positive health. Her area of interest also includes Biopsychology and Health Psychology.

NovRattan Sharma is working as professor of psychology at M.D. University, Rohtak with a teaching and research experience of more than 29 years. His areas of research include personality and positive health psychology. He has edited seven books on different areas of applied psychology. He is also an editor of Journal of Indian Health Psychology.

Journal of Indian **Health Psychology**

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Journal of Indian Health Psychology (JIHP) is a biannual refereed Journal of interdisciplinary research with the objective of furthering an understanding of the scientific relationship between behavioural principles on one hand and health on the other. The Journal provides a forum to integrate the theoretical, empirical and application based knowledge in this area. The distinctive feature of the journal include a special section of the articles based on Indian perspectives on health psychology and behaviour. Dissemination of the knowledge among the professional and upcoming researchers will go a long way in benefiting the masses. Research carried out at individual, group and community level are welcome.

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Journal of Indian Health Psychology

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EDITORIAL

The Journal of Indian Health Psychology is devoted to diverse kind of empirical investigations in the field of Health Psychology. This issue of the journal includes thirteen research articles related to different aspects of health. The first article by Archana and Rajbir Singh examines the impact of education and gender on loneliness and depression among students. The second article by Rekha Gujjar and Manju Mehta compares mental health among androgynous female university teachers, government doctors and administrative officers. They found that androgynous administrative officers were significantly higher positive self evaluation and group oriented attitude as compared to androgynous teachers and doctors. The next article of Shahin Ghani and Bhupinder Singh studies the impact of economic status on quality of life in caregivers of patients with primary osteoarthritis of the knee. The findings of the study implied that economic differences indeed play crucial role in the wellbeing of caregivers of osteoarthritis patients.

Alena Slezackova and Jirina Liliana Doubkova's article deals with human relationship to nature and the positive influence of nature on selected aspects of his/her quality of life, primarily on life satisfaction and meaningfulness of life. The next article by Shraddha Sharma and Ira Das studies life style related behaviours i.e. spiritual behaviour and sleeping behaviour. Hemalatha and Ravindran aim to examine the role of psychological factors namely mental adjustment, depression and quality of life in patients diagnosed with breast cancer in his article. The next article by Shivalika and Anup Sud investigated the relation between psychological stressors and life satisfaction of army personnel. Manoj Kumar Tiwari, Saroj Verma, Jaya Chakravarty and Shyam Sundar in their study aims to assess locus of control (LOC) and their role in the psychological health of HIV-infected patients on second line antiretroviral treatment.

O.P. Sharma, Rajshree Tewari and Juhi Deshmukh conducted the research to understand, infer and predict the multifarious effect of home environment, life skills and parenting mood on the mental health and adjustment of primary school children in single-parent and dual-parent families. Another article enlisted in this issue attempts to understand the coping strategies used by patients with

Parkinson's disease. The article of Alka and NovRattan Sharma studies comparative relation between identity and wellbeing of the male and female adolescents. Parisha Jijina and Uday K. Sinha investigated the effectiveness of social skill training program on a child diagnosed with disorder of mixed scholastic skills and deficits in social skills. The results reported increase in the social skill scores post training and mother too reported a significant improvement in the social skills of the child. The last article of Munshi and Mukerjee attempts to explore poetry as means to reduce stress and health promotion.

Editors and publisher are grateful to all the contributors for the contribution of their research papers, referees and reviewers for their valuable inputs.

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IMPACT OF EDUCATION AND GENDER ON LONELINESS AND DEPRESSION AMONG STUDENTS

Archana* and Rajbir Singh**

ABSTRACT

The present study was conducted to examine the impact of education and gender on loneliness and depression among students. The sample comprised of 387 students from both school and college. Findings indicated that male students were observed to be more lonely than female students. However, school students were found to be more lonely and depressed as compared to the college students. A significant interactive effect was observed for loneliness and depression when both education and gender were taken altogether. The implications of the study are discussed in this paper.

Key Words: Loneliness, Depression, Interactive Effect.

Loneliness exists in all age-groups, yet it is considered as a common problem among students. Loneliness is an enduring condition of emotional distress that arises when a person feels estranged or rejected by others and lacks appropriate social partners for desired activities, particularly activities that provide a sense of social integration and opportunities for emotional intimacy (Rook, 1984). According to Peplau and Perlman (1982), loneliness is defined as the *unpleasant experience that occurs when an individual's social network is deficient either qualitatively or quantitatively*. Lonely people feel bad because of insufficient interpersonal relationships. This insufficiency may be either quantitative (e.g., too few friends) or qualitative (e.g., no deeply intimate relationships).

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Loneliness represents an unhappy feeling of emptiness. These unhappy feelings of emptiness can be in the form of: *emotional loneliness* and *social loneliness*. In *emotional loneliness*, one feels that there is a lack of close, caring relationships. That is, a sense of utter aloneness permeates one's being, making the world seem empty and cold or causing him to view his own self as having these characteristics. *Social loneliness* is caused by the absence of an 'engaging social network', and can be alleviated only by reengaging the person in such a network. While emotional and social isolation differ in their causes, they do share one common theme, i.e., pre-occupation with filling the missing social relationships. The kind and amount of social interaction each person needs to overcome loneliness will vary from person to person. Nevertheless, it is generally true that the intensity of one's loneliness will reflect the discrepancy between an individual's actual level of social contact and the kinds of relationships that individual would ideally like to have. Thus, no matter how high or low one's level of need for others may be, being with other people gives him a chance to form the kinds of relationships he wants and needs. Conversely, when the opportunity for meaningful social contact becomes limited, he can expect to experience an increase in loneliness.

Social contact comes from two main sources: (i) within the family and (ii) from work or an involvement with the community. While an opportunity for social contact doesn't guarantee the formation of the types of relationships needed to stave off loneliness, it does provide an opportunity. Thus, when either family or work related social interactions are minimized, one feels lonely. Having satisfactory family relationships is more effective in reducing loneliness than having satisfactory work relationships or status in the community. This finding is consistent with the theory that emotional loneliness may hurt more than social loneliness. Achieving a satisfactory position in an occupation or status in the community would give individual a greater chance of forming successful interrelationships with others, thus fending off social loneliness. But having a satisfactory family life would seem to be necessary to meet the deep emotional attachment necessary to ward off emotional loneliness.

Depression, like loneliness is also a major problem that is commonly seen among students. Depression is a dysphoric mood state accompanied by a loss of enthusiasm, a general slowing of mental and physical activity and a set of negative cognitive distortions (Beck, 1976). Depression is a pattern of sadness, anxiety, fatigue, agitated behaviour and reduced ability to function and interact with others. It ranges from mild feelings of uneasiness, sadness and apathy to intense suicidal despair. Occasional depression is a common experience. However, when depression is chronic or especially intense, it is considered a serious psychological problem. Depressed people draw illogical conclusions about themselves. They blame themselves for normal problems and consider even a minor failure a catastrophe. According to Seligman (1975) depression is caused

by a feeling of learned helplessness. The depressed person learns to believe that he has no control over events in his life, that nothing he does makes any difference and that it is useless to even try. Depressed people are negative thinkers. They view life through dark- coloured glasses.

Depressed individuals usually see neutral or even pleasant events in a negative light- for instance, they may interpret a compliment from a friend as insincere, or someone's being late for an appointment as a sign of rejection. These distortions in thinking make it difficult for depressed people to make realistic judgments about events and they begin to engage in primitive thinking- a thinking characterized by global judgments that are absolute, invariant and irreversible. Depressed persons show repetitive negative thoughts about the self, the world and the future. They see themselves as inadequate and worthless, feel that they can't cope with the demands made on them and dread the future, which, they believe, will bring more of the same.

METHOD

Objectives

- To examine the relationship between loneliness and depression
- To study the effect of level of education on loneliness and depression
- To study the comparative relationship between loneliness and depression among males and females

Sample

The sample of 387 students (males = 203 and females = 184) was randomly taken from both school and college situated in Delhi. Data were collected from 177 college students (males = 93 and females = 84) and 210 school students (males = 110 and females = 100). Their education level varied from class IX to graduation with the mean age of 16.81 years. The choice of college and school was guided by the consent for collecting data and the cooperation extended by the school and college authorities.

Tools

The following tools were used in the study:

- **The Revised UCLA (University of California, Los Angeles)**

Loneliness Scale: The revised UCLA Loneliness Scale is a self report scale developed by Russell, Peplau and Cutrona (1980). It is a Likert type scale consisting of 20 items that included 10 negatively worded and 10 positively worded items. The scale produces a general loneliness score of at least 20 and at most 80. Higher scores mean that individuals experience the feeling of loneliness at a higher degree. The scale has high internal consistency, with a coefficient alpha of 0.94. Loneliness scores were significantly correlated with scores on the Beck Depression

Inventory ($r = 0.62$) and with the Costello- Comrey Anxiety ($r = 0.32$) and Depression ($r = 0.55$) scales.

- **Beck Depression Inventory (BDI):** The BDI is a 21 item self-report inventory measuring characteristic attitudes and symptoms of depression (Beck et al., 1996). For each item there are four options. Each of the item receives a score between 0 and 3, with the lowest score 0 and the highest being 63. Higher the score, higher the level of depression. The internal consistency for the BDI ranges from 0.73 to 0.92 with a mean of 0.86. The BDI demonstrates high internal consistency, with alpha coefficients of 0.86 and 0.81 for psychiatric and non-psychiatric populations, respectively.

Procedure

For collecting the data from school and college, their respective Principals were contacted personally. The procedure of stratified random sampling was followed. The stratification was done for gender and type of education. The students were selected from both colleges and schools situated in Delhi. As desired by the institution, the confidentiality was strictly maintained. Only those who volunteered to participate in the study were taken as subjects. After establishing a good rapport with the students, the data were collected by administering the questionnaires. The students were asked to read the instructions and respond to all the items given in the questionnaires carefully. The total data collected from students was further analyzed.

RESULTS AND DISCUSSION

ANOVA was carried out to find the effect of level of education (College vs. School), gender (Male vs. Female) and their interactive effect on loneliness and depression, i.e., whether education, gender as well as altogether education and gender had significant or non significant effect on the variables of loneliness and depression.

Loneliness

Table 1 given below depicts the means and standard deviation for the main effects of level of education and gender on loneliness.

Table 1. Means of Level of Education and Gender on Loneliness Along with Cell Means

Level of Edu Gender	School	College	Main Means (Gender)
Males	45.61 (SD = 7.51) n = 110	42.86 (SD = 10.23) n = 93	44.35 (SD = 8.95)
Females	46.00 (SD = 6.66) n = 100	37.75 (SD = 9.84) n = 84	42.23 (SD = 9.21)
Main Means (Level of Education)	45.80 (SD = 7.11)	40.44 (SD = 10.34)	43.34 (SD = 9.12) N = 387

The main mean for the loneliness was found to be 43.34 and the standard deviation was 9.12, being above average (Russell et al., 1980).

Table 2. Summary Table of ANOVA for Loneliness (Corrected by age)

Sources	Sum of Squares	df	Mean Square	F	Sig p <
Corrected Model	4120.35	4	1030.09	14.05	0.00
Intercept	893.43	1	893.43	12.18	0.00
Age	200.18	1	200.18	2.73	0.10
Education (Level)	1173.40	1	1173.40	16.00	0.00
Gender	591.65	1	591.65	8.07	0.00
Education* Gender	603.18	1	603.18	8.23	0.00
Error	28014.94	382	73.34		

ANOVA (corrected with age) was carried out to find the significance of the effect of two main variables – Level of Education (School and College) and Gender (Male and Female) as well as their interactive effect (Level of Education x Gender).

The Table 2 shows the Summary of ANOVA, which revealed that the level of education was a significant source of variance as indicated by F as 16.00 ($p < 0.001$). It was observed that school students had higher loneliness scores (45.80) in comparison to college level students (40.44), thus revealing that the college education buffers loneliness (Table 1).

Gender as a main effect also emerged as a significant source of variance, as males were observed to be slightly more lonely (44.35) as compared to females (42.23).

A significant interactive effect also emerged between level of education and gender ($F = 8.23$; $p < 0.001$).

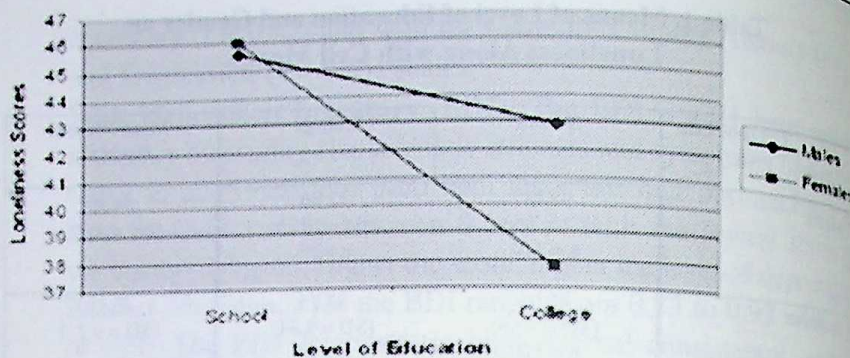


Fig 1 Interactive Means of Loneliness for male and female students at School and College levels

Figure 1 depicts mean loneliness of male and female students, in school and college. The figure indicates lowering effect of college education in female since their mean loneliness declined from 46.00 to 37.75 in comparison to male where the decline was not to that great extent, i.e., 45.61 to 42.86 so as to cause significant interactive effects.

Depression

Table 1 depicts the means and standard deviations for main effects of level of education and gender on depression.

Table 3. Main and Cell Means (2 x 2) of Level of Education and Gender on Depression

Level of Edu Gender	School	College	Main Means (Gender)
Males	45.61 (SD = 7.51) n = 110	42.86 (SD = 10.23) n = 93	44.35 (SD = 8.95)
Females	46.00 (SD = 6.66) n = 100	37.75 (SD = 9.84) n = 84	42.23 (SD = 9.21)
Main Means (Level of Education)	45.80 (SD = 7.11)	40.44 (SD = 10.34)	43.34 (SD = 9.12) N = 387

The depression scores of 387 subjects were obtained by using Beck Depression Inventory (BDI). The main sample mean for depression scores was 12.52 with a standard deviation of 6.28. The BDI describes different levels of depression and the score of 12.52 revealed mild to moderate depression (Beck et al., 1996).

Table 2. Summary Table of ANOVA for Depression(Corrected by age)

Sources	Sum of Squares	df	Mean Square	F	Sig p <
Corrected Model	2874.39	4	718.60	22.26	0.00
Intercept	358.22	1	358.22	11.09	0.00
Age	40.36	1	40.36	1.25	0.26
Education (Level)	185.33	1	185.33	5.74	0.02
Gender	0.81	1	0.81	0.03	0.87
Education* Gender	542.01	1	542.01	16.79	0.00
Error	12334.17	382	32.29		
Corrected Total	15208.56	386			

ANOVA revealed that level of education was a significant source of variance as indicated by F as 5.74 being significant beyond 0.02 level of probability.

It was observed that school students had higher depression scores (14.77) in comparison to college level students (9.85). The findings attest to the notion that the education has buffering effect for depression (Table 2.1).

It was further observed that gender as a main effect did not emerge as a significant source of variance. Males and females had comparable means (12.50 and 12.55) for depression.

However this null effect of gender was not invariant across levels of education leading to a significant interactive effect between level of education and gender ($F = 16.79$, $p < 0.001$).

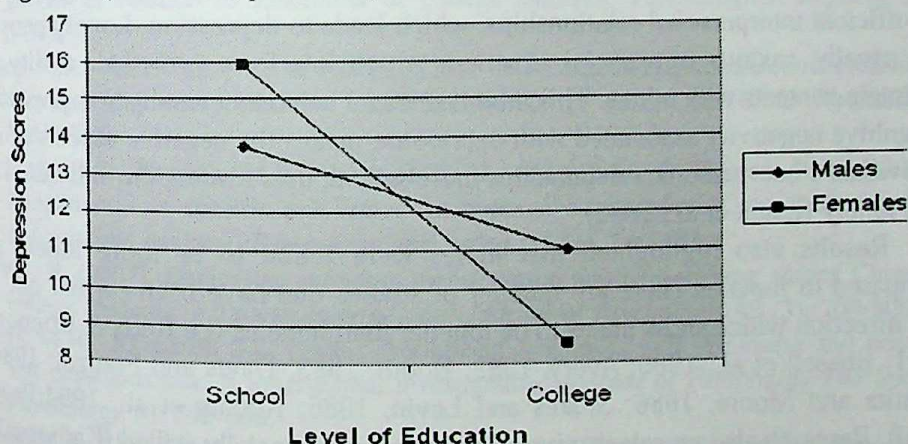


Fig 2: Interactive Means of Depression for male and female students at School and College levels

Figure 2 displays mean depression of males and females at school and college level of education. The figure exhibits more prominent lowering effect of education in females as their means tend to go down from 15.90 to 8.56 in

comparison to males where the slope of the curve was not that much steep i.e., 13.75 to 11.02.

Results revealed that the level of education and gender both emerged as significant source of variance, thus showing that school students were observed to be more lonely as well as depressed as compared to college students. However, it was also observed that as the level of education increases from school to college, the scores on loneliness and depression reduces. Also students at school level face more adjustment difficulties and stressful situations that they have to cope with. Such problems cause them to become more vulnerable to various mental health problems. Besides this, the results also revealed that the education at the college level had a more positive impact in students as their depression and loneliness reduced to a great extent. This suggests that in order to encourage the interpersonal relationship and social linkages among students, higher education needs to be promoted.

Results showed that college female students had lowest loneliness and depression than other groups. The research shows that both loneliness and depression are distinct constructs; that one is not the result of the other, but that both share some common origins (Wiseman et al., 1995; Cacioppo et al., 2006). At the same time, research findings also suggest that loneliness plays a causative role in the development of depression (Heinrich & Gullone, 2006). According to Stek et al (2004) those who are lonely are also likely to be depressed. Depression is considered to be one of the important personal correlates of loneliness (Marangoni and Ickes, 1989). Lonely people have insufficient interpersonal relationships, which leads to depression. Lonely people are usually anxious in a social situation, which interferes with their ability to maintain contacts with others. This inhibited social behaviour results in depression. Cognitive negativity associated with depression makes the negative aspects of an individual's interpersonal relationships more salient, thus leading the individual to feel lonely (Essex et al., 1985).

Results also highlighted that males were found to be more lonely as compared to females. There are number of studies that have been carried out in this direction which show males to be lonelier than females (Le Roux & Connors, 2001; Russell et al., 1980; Avery, 1982; Booth, 1983; Davis and Franzoi, 1986; Schultz and Moore, 1986; Stokes and Levin, 1986; Koenig et al., 1994; Page, 1990). Research also reveals that males are usually less socially skilled (Kalliopoulou and Laitinen, 1991), display more withdrawal and inhibited social behaviours (Renshaw and Brown, 1993; Rubin, LeMare and Lollis, 1990), are less willing to take social risks (Moore and Schultz, 1983) and are less willing to assert their rights to others (Bruch et al, 1988). On the other hand, females spend more time in maintaining social relations with others. Also, male students are more reluctant to seek help (Chang, 2007) and also have negative opinions about emotional help seeking (Michael et al., 2006).

Social support is considered to be a better predictor of perceived loneliness for males than for females. Males and females report different standards in evaluating loneliness, with males using group oriented criteria and females focusing on dyadic relationships. A study by Schultz and Moore (1986) highlighted that affective and social risk taking measures were more highly related to loneliness among males than females. Loneliness is more likely to be associated with negative personal and affective self-evaluations for males than for females. Males react to loneliness more negatively than females because of tendency to attribute loneliness to personal failures rather than external, uncontrollable causes. Having difficulty in initiating social risks may contribute to loneliness for males more than females. Social pressures may influence one's admission of loneliness, whereby men who display symptoms of loneliness may be regarded more negatively than women who display the same symptoms.

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MENTAL HEALTH AMONG ANDROGYNOUS FEMALE UNIVERSITY TEACHERS, GOVERNMENT DOCTORS AND GOVERNMENT ADMINISTRATIVE OFFICERS

Rekha Gujjar* and Manju Mehta**

ABSTRACT

The present study was undertaken to compare Mental Health among androgynous female university teachers, government doctors and administrative officers. A total of 100 university teachers, 100 doctors and 100 government administrative officers from the state of Rajasthan served as sample for the study. To attain the objectives of the study, two psychometric instruments—the Bem Sex role Inventory (Bem 1981) and the Mental Health Inventory by Jagdish and Srivastava (1983) —were administered to the sample population to obtain data pertaining to the androgynous sex role orientation and Mental Health variables. The data were analysed in terms of the t-test. The results of the study revealed that androgynous administrative officers were significantly higher on mental health-positive and its dimensions positive self evaluation and group oriented attitude as compared to androgynous teachers and doctors.

Key Words: Androgynous Sex Role Orientation, Mental Health

As women increasingly gain occupational mobility, they are not only exposed to the same physical hazards of work environment as men but also exposed to the pressures created by multiple role demands and conflicting expectations. By fulfilling their economic needs, employment has no doubt made women independent with an identifiable social status but it has also made them to juggle into two main domains of life-work and family. Multiple roles can increase the interpersonal and intrapersonal conflict experienced by women who simultaneously

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maintain professional and personal responsibilities. This kind of lifestyle of women can increase work stress and negatively affects her mental health and ability to cope with stress in difficult situation. At this time of challenging situation androgynous sex role orientation can play an important role in a woman's life.

Bem suggested that androgynous individuals (*i.e.*, those who have both masculine and feminine traits) may draw upon both masculine and feminine behaviours. Androgynous individuals' behaviours may vary more as a function of situational demands because of their more extensive behavioural repertoire. Androgyny provides a significant integrating concept for a number of areas within the field of organizational behaviour. It provides both a theoretical framework and a practical process for helping men and women become effective managers while retaining and expanding their concepts of themselves as human beings. Androgyny, by encouraging an individual to encompass the entire range of human behaviours, provides an open-ended path to growth and development.

Many past studies were consistent with the proposition that "to be androgynous is better." For example, compared to the gender-typed individuals, androgynous men and women were found to be: better liked (Major, Carnevale and Deaux, 1981); better adjusted (Orlofsky and O' Heron, 1987; Williams and A' lessandro, 1994); more adaptable to situational demands (Prager and Bailey, 1985); more flexible in coping with stress (McCall and Struthers, 1994); more comfortable with their sexuality (Garcia, 1982); more satisfied interpersonally (Rosenzweig and Daley, 1989); and, in an elderly sample, more satisfied with their lives (Dean and Gilroy, 1993). Spouses reported happier marriages when both partners are androgynous than is true for any other combination of roles (Zammichieli, Gilroy, and Sherman, 1988).

In keeping with the World Health Organization's definition (WHO, 1946), mental health is viewed as an integral part of overall health, or well-being, alongside and intertwined with physical and social health. Mental health, as an indivisible part of general health, reflects the equilibrium between the individual and the environment. It is influenced by: (a) individual psychological and biological factors; (b) social interactions; (c) societal structures and resources; and (d) cultural values. In this context, mental health is a central part of a process that comprises predisposing, actual precipitating and supporting factors as well as various consequences and outcomes.

Jahoda (1958) has said that aspects of attitudes toward self, growth and development, self-actualization, integration of personality and mastery of the environment must be considered in judging whether a person is mentally healthy or not.

The development of the Bem Sex Role Inventory ignited a line of research on the relationship between androgyny and psychological well-being. Bem (1977) found that androgynous women and masculine men reported the highest self-

esteem, but other studies indicated that androgynous individuals, whether male or female, reported the highest self-esteem (Flaherty and Dusek, 1980).

Williams and D'Alessandro (1994) compared Bem's median split method of categorizing androgyny (Bem, 1977) with three alternative models and found them all highly interrelated and predictive of positive psychological adjustment. There is recent evidence that androgynous college students believe that they have a better relationship with their parents; they reported that they are comfortable talking to them and that their parents understand their problems (Lombardo & Kemper, 1992).

Green and Kenrick (1994) in the Data obtained using the Personal Attributes Questionnaire indicated that androgynous individuals were liked better, were preferred as partners, and were perceived as better adjusted. Androgyny was associated with greater psychological well-being for a group of adolescent boys and girls (Markstrom-Adams, 1989) and for an adult group of men and women (O'Heron and Orlofsky, 1990).

Shimonaka, Nakazato, and Marushima (1994) examined Gutmann's role reversal theory and Sinnott's role blurring (androgyny) theory. The androgynous men and women possessed the highest self-esteem, followed by the masculine, feminine and undifferentiated men and women, in this order. The results supported Sinnott's but not Gutmann's theory.

Napholz (1994) identified the relationship of sex role orientation to indices of psychological well-being among working women. Analyses revealed significant differences among the four sex-typed groups on self-esteem and depression. The sex-typed group had significantly higher depression and lower self-esteem scores than the androgynous group. The undifferentiated group had significantly higher depression and lower self-esteem scores when compared with the androgynous and cross-typed groups.

METHOD

Objectives

The aim of the present study was to compare mental health among androgynous female university teachers, government doctors and administrative officers.

Sample

The total sample of the present study consisted of 300 working women engaged in government/ public sector jobs employed as university teachers, government doctors and administrative officers in Rajasthan government institutions. The locale of the study was the state of Rajasthan. Further the sample was limited to working women who were married, having children and aged between the range of 30-50 years.

Tools

In order to meet the aims and objectives and to test the hypotheses of the present study the following tools were used to measure Sex role orientation and Mental health. The details of the tools are given below:

1. *Bem Sex Role Inventory (BSRI)* developed by Bem (1981) comprised of 60 adjectives including masculine, feminine and socially desirable but neutral traits, which are to be rated from 1 to 7 depending upon the extent to which it suits oneself. 1= 'almost never true', 2=rarely true, 3=seldom true, 4= half true half untrue, 5=often true, 6=mostly true, 7=almost always true. Thus scores are obtained across four dimensions: Masculinity, Femininity, Androgyny and undifferentiated. Using median-split method, individuals who are high on masculinity and low on femininity or vice-versa are termed as Sex-typed. Those who are high on both masculinity & femininity are termed as Androgynous and those who are low on both masculinity & femininity are termed as Undifferentiated. Androgyny increases with a decrease in a difference between masculinity & femininity. Coefficient alpha for the inventory ranges between .75 and .90. Test-retest reliability over a four week period was Masculinity $r = .94$; Femininity $r = .82$; Androgyny $r = .93$. Validity coefficient as determined by Bem and Lipsitz (1981) was .75 for femininity and .72 for masculinity.
2. *Mental Health Inventory (MHI)* developed and standardized by Jagdish and Srivastava (1983) to ensure mental health (positive) of normal individuals. The salient feature of the scale lies in inclusion of the symptoms of psychological well being or positive symptoms of mental health along with absence of mental ill-health. The scale assesses the mental health in six dimensions (1) positive self-evaluation, (2) perception of reality, (3) integration of personality, (4) autonomy, (5) group oriented attitudes, (6) environmental mastery. The scale consists of 50 statements with 4 alternative responses for each statement as always, most of times, sometimes and never anchored from 1 to 4. For true-keyed statements the scoring of 1, 2, 3, 4 was given to never, rarely, often, always and reverse for false-keyed statements. Out of 50 statements 32 statements are rated negatively while 24 statements are rated positively. Total score and score in each dimension is calculated. High score indicates better mental health. The reliability of inventory as determined by split-half method was .73 calculated by using odd-even procedure. The construct validity of the inventory was .54.

RESULTS AND DISCUSSION

On the line of purpose of present study androgynous teachers, doctors and administrative officers were compared on scores of mental health and its components, using 't' statistics.

The description of results of mean difference between university teachers, government doctors and administrative officers with androgynous sex role orientation on mental health is as follows:-

On mental health-positive results of Table 1 showed that androgynous administrative officers ($M=143.67$) are significantly higher on mental health-positive as compared to androgynous teachers ($M=135.73$). The t-ratio between teachers and administrative officers is 2.496 ($p<.01$). The results also showed that androgynous administrative officers ($M=143.67$) are significantly higher on mental health-positive as compared to androgynous doctors ($M=136.35$). The t-ratio between doctors and administrative officers is 2.909 ($p<.01$).

On MHI-1, Positive Self Evaluation (PSE) Table 1 (a) showed that androgynous administrative officers are significantly higher on Positive Self Evaluation ($M=29.00$) as compared to androgynous teachers ($M=27.23$). The t-ratio between teachers and administrative officers is 2.212 ($p<.05$). The results also showed that androgynous administrative officers ($M=29.00$) are significantly higher on Positive Self Evaluation as compared to androgynous doctors ($M=27.23$). The t-ratio between scores of doctors and administrative officers is 2.095 ($p<.05$).

On MHI- 5, Group Oriented Attitudes (GOA) results of Table 1 (e) showed that androgynous administrative officers ($M=24.45$) are significantly higher on Groups Oriented Attitudes as compared to androgynous teachers ($M=22.60$). The t-ratio between teachers and administrative officers is 2.281 ($p<.05$). The results also showed that androgynous administrative officers ($M=24.45$) are significantly higher on Groups Oriented Attitudes as compared to androgynous doctors ($M=22.03$). The t-ratio between doctors and administrative officers is 3.334 ($p<.01$).

Table 1(b) to 1(d) and 1(f) on components of Mental health-Positive *i.e.* Perception of Reality (PR), Integration of Personality (IP), Autonomy (AUTNY) and Environmental Mastery (EM) showed no significant difference between occupational groups *i.e.* teachers, doctors and administrative officers with androgynous sex role orientation.

Table 1. Mean difference between female teachers, doctors and administrative officers with androgynous sex role orientation group on Mental Health-Positive (MHI-P)

Groups	Teachers	Androgynous Doctors	Administrative officers
Androgynous	M=135.73 SD=11.814 N=30	M=136.35 SD=4.557 N=31	M=143.1 SD=13.2 N=33
Teachers	-	t=.273	t=2.496**
Doctors	t=.273	-	t=2.909**
Administrative officers	t=2.496***	t=2.909***	-

2 tailed significance **.05, ***.01.

Table-1 (a). Mean difference between female teachers, doctors and administrative officers with androgynous sex role orientation group on MHI-1, Positive Self Evaluation (PSE)

Groups	Teachers	Androgynous Doctors	Administrative officers
Androgynous	M=27.23 SD=3.739 N=30	M=27.94 SD=1.289 N=31	M=29.0 SD=2.55 N=33
Teachers	-	t=.987	t=2.212**
Doctors	t=.987	-	t=2.095**
Administrative officers	t=2.212**	t=2.095**	-

2 tailed significance **.05, ***.01.

Table-1 (b). Mean difference between female teachers, doctors and administrative officers with androgynous sex role orientation group on MHI- 2, Perception of Reality (PR)

Groups	Teachers	Androgynous Doctors	Administrative officers
Androgynous	M=21.23 SD=1.331 N=30	M=21.19 SD=1.939 N=31	M=21.85 SD=2.053 N=33
Teachers	-	t=.093	t=1.327
Doctors	t=.093	-	t=1.249
Administrative officers	t=1.327	t=1.249	-

2 tailed significance **.05, ***.01.

Table-1 (c). Mean difference between female teachers, doctors and administrative officers with androgynous sex role orientation group on MHI- 3, Integration of Personality (IP)

Groups	Androgynous		
	Teachers	Doctors	Administrative officers
Androgynous	M=21.90 SD=4.581 N=30	M=21.26 SD=2.792 N=31	M=23.09 SD=5.714 N=33
Teachers	-	t=.663	t=.907
Doctors	t=.663	-	t=1.614
Administrative officers	t=.907	t=1.614	-

2 tailed significance **.05, ***.01.

Table-1 (d). Mean difference between female teachers, doctors and administrative officers with androgynous sex role orientation group on MHI- 4, Autonomy (AUTNY)

Groups	Androgynous		
	Teachers	Doctors	Administrative officers
Androgynous	M=14.33 SD=2.139 N=30	M=14.32 SD=2.039 N=31	M=14.85 SD=1.986 N=33
Teachers	-	t=.020	t=.991
Doctors	t=.020	-	t=1.045
Administrative officers	t=.991	t=1.045	-

2 tailed significance **.05, ***.01.

Table-1 (e). Mean difference between female teachers, doctors and administrative officers with androgynous sex role orientation group on MHI- 5, Group Oriented Attitude (GOA)

Groups	Androgynous		
	Teachers	Doctors	Administrative officers
Androgynous	M=22.60 SD=2.737 N=30	M=22.03 SD=1.888 N=31	M=24.45 SD=3.606 N=33
Teachers	-	t=.946	t=2.281**
Doctors	t=.946	-	t=3.334***
Administrative officers	t=2.281**	t=3.334***	-

2 tailed significance **.05, ***.01.

Table-1 (f). Mean difference between female teachers, doctors and administrative officers with androgynous sex role orientation group on MHI- 6, Environmental Mastery (EM)

Groups	Teachers	Androgynous Doctors	Administrative officers
Androgynous	M=28.30 SD=4.466 N=30	M=29.42 SD=1.928 N=31	M=29.42 SD=1.928 N=31
Teachers	-	t=1.278	t=1.278
Doctors	t=1.278	-	t=1.278
Administrative officers	t=.701	t=1.003	-

2 tailed significance **.05, ***.01.

A look into the mean difference on scores for mental health-positive depicted in Table 1 to 1(f) showed there was a significant difference between androgynous working women of all the three categories *i.e.* teachers, doctors and administrative officers. There was a significant difference between androgynous teachers ($M=135.73$) and androgynous administrative officers ($M=143.67$) ($t=2.496$, $P<.01$) with androgynous administrative officers higher on mean than teachers on mental health-Positive (MHI-P). There was a significant difference between androgynous doctors ($M=136.35$) and androgynous administrative officers ($M=143.67$) ($t=2.909$, $P<.01$) with androgynous administrative officers higher in mean than androgynous doctors Table-1(f) mental health-Positive. Also there was a significant difference between androgynous teachers ($M=27.23$) and androgynous doctors ($M=27.94$) ($t=2.212$, $p<.05$) the component of mental health-positive (MHI-P) *i.e.* Positive Self Evaluation (PSE) with androgynous doctors higher in mean than androgynous teachers.

Also there was a significant difference between androgynous doctors ($M=27.94$) and androgynous administrative officers ($M=29.00$) ($t=2.095$, $p<.05$) on positive self evaluation (PSE) with androgynous administrative officers higher on mean than doctors Table- 1(a). It was also found that on Group Oriented Attitude (GOA) a component of mental health –positive there was a significant difference between androgynous teachers ($M=22.60$) and androgynous administrative officers ($M=24.45$) ($t=2.281$, $p<.05$) with androgynous administrative officers higher on mean than androgynous teachers. Similarly androgynous administrative officers were significantly higher on mean than androgynous doctors on Group oriented attitude (GOA) with mean being 22.03 and 22.03 respectively ($t=3.334$, $p<.01$) Table-1 (e).

Briefly, it can be said that androgynous administrative officers have higher mental health-positive (MHI-P) as compared to teachers and doctors. On

component of mental health-positive *i.e.* Positive self evaluation (PSE) administrative officer were significantly higher than doctors and doctors were significantly higher than teachers. Also on one other component of mental health-positive *i.e.* Group oriented attitude (GOA), administrative officers were significantly higher than teachers and doctors.

Proposed hypothesis was supported in case of teachers, doctors and administrative officers for mental health- positive and two of its components *i.e.* positive self evaluation and group oriented attitude.

The profession of administrative officers provides more variety, autonomy *i.e.* the freedom to make choices on job as compared to that of teachers who are expected to follow and act according to the guidelines or syllabus of the university. The stressfulness of the task depends on the degree to which it can be controlled. The work- role that combines highly psychological demanding tasks with low level of control over the tasks exerts a major toll by simultaneously creating arousal and frustration. Also the teachers have the pressure of completing the syllabus in the particular time. They are responsible for the results of their students and have to give good results.

For the administrative officers there are many staff members under them clerks, personal assistants etc. and more of all they have the power to take decisions and doctors also have the nurses to help them but teacher don't have such helping hand, they have to prepare their lecture themselves and also have to deliver them with a proper understanding. This may be the reason that administrative officers have good mental health-positive as compared to doctors and teachers. All of them being with androgynous personality the difference have come because of the difference in job. Being high on masculinity and high on femininity *i.e.* being androgynous is the requirement of the administrative officers which is helping them in maintaining better mental health -positive as compared to doctors and teachers. The results showed that administrative officers were higher on positive self evaluation, which shows that they are aware about themselves and real world and also have a more group oriented attitude which shows that they believe in teamwork and have greater group oriented attitude than individualistic approach as compared to teachers and doctors.

Cooper, Rout and Faragher (1989) in a study on mental health, job satisfaction and job stress among general practitioners disclosed four job stressors that were predictive of high levels of job dissatisfaction and lack of mental wellbeing; these were demands of the job and patients' expectations, interference with family life, constant interruptions at work and home, and practice administration. Burchardt and Serbin (1982) investigated the psychological androgyny and personality adjustment and found that sex role flexibility (androgyny) is positively related to mental health in women and indicated that relationships between sex role conformity and personality development may differ for males and females.

Robinson, Shaver, and Wrightsman (1991) noted that appropriate sex typing was thought to be important to good mental health and overall adjustment. Specifically, the masculine male and the feminine female were regarded as more psychologically advantaged as compared with their less sex-typed counterparts. Whereas the feminine sex role has been described as including interpersonal oriented and nurturing traits such as caretaking and being kind to others (i.e., expressive or interpersonal traits), the masculine sex role is descriptive of self-assertive or instrumental traits such as self-confidence and independence (Spence and Helmreich, 1978).

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IMPACT OF ECONOMIC STATUS ON QUALITY OF LIFE IN CAREGIVERS OF PATIENTS WITH PRIMARY OSTEOARTHRITIS OF THE KNEE

Shahin Ghani,* and Bhupinder Singh**

ABSTRACT

Care giving, a multifaceted and complex phenomenon involves long term functional and financial care of patients. A caregiver is defined as an unpaid relative or friend who assists the patient with their daily living. As he undergoes the heavy demand, pressures and responsibilities of caring, coordinating and managing the life of a patient it may have a major impact on the caregivers life due to the burden and stressors associated with the job and can lead to distress, depression, hypertension, pessimism, negative health effects and even burnout in few of them. Impact of this tedious role and change in lifestyle can affect the caregivers well being and quality of life over a period of time. The burden and perceived stress associated with the physical, emotional, social and financial consequences of caring may result in further aggravating the problem. Such taxing circumstances that restrict lifestyle and affect the general well being of caregivers is further enhanced by the socioeconomic limitations and resultant lack of support systems. As such the present study was undertaken to investigate the impact of socioeconomic differences on the quality of life (QOL) in caregivers of Osteoarthritis (OA) of the knee patients (n= 100), a degenerative disease including a group of mechanical abnormalities involving degradation of joints. The WHO QOL-BREF questionnaire containing 26 items was used to assess the 4 quality of life domains: physical health, psychological state, social

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relationships and environmental well being in caregivers. The data were analyzed by applying 't' test. The results revealed significant difference between caregivers belonging to high socioeconomic strata and low economic with caregivers from the former group displaying better quality of life compared to the latter. The finding seems to imply that socioeconomic differences do indeed play a crucial role in the well being of caregivers of patients with a crippling disorder such as osteoarthritis of the knee.

Key Words: Caregivers, Osteoarthritis (OA), and Quality of Life (QOL)

The term "Osteoarthritis"(OA) has originated from the greek word 'osteo' meaning 'of the bone' and 'arthro' meaning 'inflammation' i.e., the term implies inflammation of the joint or bones. Also known as 'Degenerative joint disease', it includes a group of mechanical abnormalities involving degradation of joints. Symptoms may include joint pain, tenderness, stiffness, locking, decreased motion, muscle weakness, sometimes effusion (accumulation of excess fluid around the knees), crepitus(a crackling noise) muscle spasms, contractions in tendons, some form of deformity or even a condition known as Baker's cyst(a harmless but painful collection of joint fluid behind the knees) . With increased age and time, the condition further aggravates and the initial symptoms lead to loss of cartilage, as such when bone surfaces become less well protected by cartilage the bone may get exposed, less resilient and damaged resulting in decreased movement and inactivity, in case of OA of the knee patients leading to muscular atrophy and ligaments becoming more lax with time. As OA progresses the patients feel worse and their movement gets more restricted and painful. Primary OA of the knee is a degenerative 'wear and tear' process observed in people usually above the age of 40 years with women having a greater chance to be affected. Here symptoms are related to, but not caused by the age factor while in secondary OA, symptoms may arise due to any cause apart from age such as trauma, tumor, deformities, genetics, obesity and so on.

Primary OA of the knee, a painful and debilitating condition, is the leading cause of chronic disability across the world today. With over 80% of the population depicting evidence of OA by the age of 65 years the relevance of caregivers, a term usually used to refer to "unpaid relatives or friends of a disabled individual who help that individual with his/her activities of daily living" is increasingly being understood and valued. Also understood as "someone whose life is in some way restricted by the need to be responsible for the care of someone who is ill, handicapped, frail, disabled or whose health is impaired by sickness or old age" the term 'dependent care' (care of a dependent) has also been used as a substitute to explain help and assistance provided by family, spouse, children or any other concerned adult.

Care giving is a multifaceted and complex phenomenon with caregivers being the backbones of long term care provided to people at homes, it involves

providing a wide variety of services to care recipients such as administering medications and physical therapy, assisting with daily tasks, meeting with healthcare providers, coordinating treatment regimens and schedules, helping with financial and administrative aspects of medical care, health insurance besides providing emotional support for coping with disease as such their need to be updated with information, resources, advice and emotional support can be as great as or even greater than the needs of their care recipients.

With an increasingly ageing population in all societies the role of caregivers is increasingly being recognized as an important one both functionally and financially. Also the heavy demands and responsibilities of caring for a vulnerable relative or friend along with the huge impact that caring may have on an individual's life due to the demands and pressures of care giving, lack of realistic alternatives, and degree of perceived duty of care felt by the care giver can be an added burden, stressor leading to distress, depression, hypertension, pessimism, negative health effects and may even lead to burnout in them. As one realizes the role and relevance of care giving in a patient's life, one also needs to dwell on the impact of this tedious role being essayed in a caregiver's life and the change in his lifestyle as a result of the requirements and demands this service and its pressures make on him. These aspects of concern may be related to financial costs, exclusion and discrimination at work, social isolation and poor health due to the stressful circumstances they undergo. The burden and perceived stress associated with the physical, emotional, social and financial consequences of caring for a chronically ill family member may result in a condition commonly known as "caregiver's syndrome". Also the embarrassment, overload and resentment arising out of the situation accompanied with a feeling of loss of control on the part of caregivers is a clear indicator of perceived burden in them.

The strain due to change in lifestyle, failure in housekeeping, pursuing hobbies and active social life apart from the confining nature of care giving can also enhance the risk faced by them. The situation can get further complicated if a caregiver has no support and his service may also put him in conflict with his/her spouse or children. Such taxing circumstances that restrict lifestyle and affect well being can thus create a 'sandwich generation' of caregivers whose life can have added pressure since they need to care for both their parents needs as well as their children's demands and requirements thus dividing their time, energy and limited resources between both their dependents making it a far worrisome situation. Relevant studies reveal a higher level of depression, perceived stress and lower level of self-efficacy in caregivers, also some studies have shown increased stress in caregivers can harm their immune system, making them more susceptible towards coronary disease and it may also have an impact on their cognitions thus in the long run having a negative impact on self care as well as care for their recipients.

In accordance with the above findings, the present study attempts to evaluate the role of socioeconomic differences on Quality of life (QOL) in caregivers of OA of the knee patients. QOL is a multidimensional umbrella construct that refers to all aspects of a person's life including aspects of physical health, psychological well being, social and environmental well-being and reflects the patient's subjective evaluation of himself on these dimensions. The concept of QOL is in accordance with the definition proposed by the WHO which considers health to not only be absence from disease but also the presence of physical, mental, social and spiritual well being as such QOL has been considered an important health indicator and has been used to evaluate caregivers in this particular study that has been undertaken. WHO defines Quality of life as individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment.

In other words, QOL helps us understand "the degree to which a person enjoys the important possibilities of his or her life" i.e., it evaluates the general well being in persons and helps care givers perceive their own health, productivity and connectedness. Hornquist (1982) defines QOL as a "broad spectrum of dimensions of human experience, ranging from those associated with the necessities of life to those associated with an achieving sense of fulfillment and personal happiness" while Walker and Rosser (1987) define QOL as a "concept encompassing a broad range of physical and psychological characteristics and limitations which describe an individual's ability to function and to derive satisfaction from doing so". With the increased focus on 'psychology of happiness' in contemporary times the concept has spurred renewed interest in health related Quality of life (HRQOL) issues and as such they have become a vital and often required part of health outcome appraisal.

In order to improve the understanding of the nature and magnitude of the burden of informal care, various studies have been carried out which have helped in understanding the dilemma and burden of caregivers. Findings obtained in a study by Kornblith et al (1994) revealed that the most striking feature in such scenarios is the tendency for the caregivers to have QOL worse than that of the patient. Also caregivers reported greater psychological distress than the patients themselves. In a study conducted by Jones and Peter (1992) it was found that caring for an incapacitated individual worsened health in the caregivers besides impairing their social and family life and in the process increasing stress, anxiety and depression. In another study conducted by Guerriero Austrom and Henderie (1992) it was revealed that carers were both physically and mentally

exhausted while caring for patients with Alzheimer's disease. Weitzenkamp et al (1997) reported that the carers of patients with spinal cord injuries had higher level of depression. The excess manifestations of depression were both somatic (appetite loss, sleeplessness) and affective (feeling 'blue' crying). Two studies conducted, separately, by Hinton (1994) and Axellson and Sjoden (1998) revealed that partners of cancer patients in palliative home care settings were known to display anxiety and depression more as compared to the patients and more often attempted to disguise their feelings. Another relevant study by Das Chagas Medeiros et al (2000) on caregivers of rheumatoid arthritis patients revealed lower health status scores than do healthy controls particularly on emotional, mental and general health status scales. Also it was found that the level of morbidity in caregivers was only slightly less than that in individuals with major depression. Nijboer et al (1999) in his study came to the conclusion that differential care giving situations have different consequences for the care giver for *e.g.*, those that confine the care givers to the house are more likely to have a negative effect on QOL and where care giving is provided over a long period of time the quality of the patient-partner relationship becomes increasingly important.

Given the relevance of care giving and the pressures associated with it, it becomes imperative to ensure the well being of carers themselves or as is appropriately said "caring for the caregivers" with the assistance of support groups facing the same daunting circumstances; It also helps to have back up help from formal and informal network of friends, family and professionals; creation, mobilization and utilization of resources through support systems; regular screening and treatment of care givers for depression and other disorders; consistent assessment, intervention and evaluation in helping them establish realistic goals and expectations related to care giving; confronting challenges to their well being; helping them understand their feelings towards care giving both positive and negative; identifying formal and informal needs and ways to access help; prioritizing self care goals and strategies for achieving these goals; time management and ways to spend leisure time; ensuring respite care and pleasant therapies for them where they can take a break from their hectic schedules and most importantly making them look towards their future and life beyond care giving.

Accordingly, in the long drawn out process of patient recovery it's usually the care givers whose own health gets compromised, keeping this aspect in mind, the present study has been undertaken to understand the impact of economic differences on the QOL in care givers of OA of the knee patients.

It was hypothesized that caregivers belonging to the higher economic stratum would have a better quality of life on the 4 domains of physical health, psychological state, social relationships and environmental well-being as compared to caregivers belonging to the lower economic stratum.

METHOD

Objective

To fulfill the objective of the study two separate groups were taken, one comprising care givers belonging to the higher economic stratum and the other group included caregivers belonging to the low economic stratum. These two groups were compared on measures of quality of life.

Sample

The study included 100 care givers, all graduates and above, between the age group of 30 to 45 years, while the patients of OA of knee being cared for were all above 60 years of age. It was ensured that the sample included 50 caregivers belonging to high economic (HSE) status families having an annual income of Rs 10 lakh and above and 50 belonged to low economic (LSE) status families having an annual income of Rs 2 lakh and below.

Tool used

The WHO QOL-BREF questionnaire developed by the WHO group (1998) was used. It is an abbreviated 26-item version of the WHOQOL-100 questionnaire and is a cross culturally valid self rating questionnaire that contains 2 items to measure the overall quality of life and general health while the remaining 24 items assess the four quality of life domains: physical health, psychological state, social relationships and environmental well being. All domains are strongly and positively associated with the concept of overall QOL (Item 1) and health (Item 2). The items are rated on a five point likert scale and analysis of internal consistency, discriminant validity and construct validity through factor analysis has indicated good to excellent psychometric properties. Test retest reliability was found to be good for each of the four domains (Cronbach alpha 0.66 to 0.84)

Procedure

All the 100 caregivers (50 each from both the HSE and LSE groups) were administered the WHO QOL- BREF questionnaire. 't' test was used to test the significance of mean differences between both the groups on measures of quality of life.

RESULTS AND DISCUSSION

The results of the study revealed that the economic stratum did indeed have a significant impact on the quality of life experienced by caregivers. Analyzing the self perceived "overall quality of life" between both the groups, significant difference was obtained between caregivers from the high economic strata (HSE) ($M=3.92, SD=.695$) as compared to caregivers belonging to the low economic stratum ($M=2.20, SD=.808$) on the QOL item thus depicting that

caregivers with high income enjoy better overall standards in living life and overall well being due to the presence of strong support systems, help and facilities available to them being in a financially secure position ensuring lesser burden compared to their counterparts to a certain extent

Table 1. Mean, SD and t values of High socioeconomic strata and Low socioeconomic strata caregivers on the QOL and its domains

Variables	HSE caregivers		LSE caregivers		t ratios
	Mean	SD	Mean	SD	
QOL	3.92	.695	2.20	.808	11.409**
Health	3.80	.755	2.24	.916	9.288**
Physical health	67.2	14.63	43.04	12.32	8.930**
Psychological health	69.72	10.73	45.40	16.57	8.709**
Social relationships	62.12	12.34	28.88	19.13	10.323**
Environment	60.48	11.12	38.12	8.98	11.060**

** p < 0.01

In terms of "health" also significant difference were seen between both HSE (M=3.80, SD=.755) and LSE (M=2.24, SD=.916) care givers with the HSE caregivers found to be in better health which can be explained in terms of better support systems and help received both financially and otherwise relieving the pressures on one's life and health as well as reducing the possibility of burden, overload and burnout due to care giving in these groups.

Comparing the scores obtained on the 1st domain, "physical domain" both the groups again revealed significant difference with the HSE (M=67.20, SD=14.63) caregivers being in better physical health then LSE caregivers (M=43.04, SD=12.32) thus, HSE caregivers were found to have better energy levels to serve their purpose also reporting lesser fatigue, pain and discomfort while doing their service besides having better sleep and rest leading to better general well being scores explained again in terms of their privileged position where they are not expected to be very hands on helpers as compared to their counterparts the LSE caregivers who devoid of facilities and support in terms of domestic help have to do all their house keeping chores personally along with their care giving duties thus adding to their stress and pressures in day to day living and lifestyles.

In terms of "psychological health" HSE caregivers (M=69.72, SD=10.73) again were found to be having a significant edge over LSE caregivers (M= 45.4, SD=16.57) thus demonstrating that HSE caregivers perceived their psychological health better then their counterparts be it in terms of their bodily image and appearance, positive or negative feelings, self esteem, or their cognitive processes that may include thinking, learning, memory skills or even concentration. Being in a position where they can take respite from their hectic lifestyles and pressures

relieves the HSE caregivers burden thus keeping them psychologically healthy and in a better position to relax and deal with their responsibilities as compared to their counterparts whose physical health is compromised due to their hectic responsibilities which almost take their entire day and leave no time for recreation or entertainment in the absence of replacements or domestic helps thus affecting their psychological well being and outlook towards their mental health. On the next domain "social relationships" significant difference was again noticed between both the groups with HSE caregivers ($M=62.12$, $SD=12.346$) faring better and maintaining better social and personal relationships then their counterparts the LSE caregivers ($M=28.8$, $SD=19.13$) thus supporting the fact that social support, sexual and emotional aspects in personal relationships are handled better by the former proving that economic security does indeed have a major impact on social life lived while care giving.

Finally, the scores obtained on the 4th domain "environment" again revealed a significant difference between the HSE caregivers ($M=60.48$, $SD=11.12$) and the LSE caregivers ($M=38.12$, $SD=8.98$) proving that higher economic stratum with financial resources bring in more freedom, physical security and quality of living, health and social care accessibility besides better and healthy hygienic home environment, better opportunities for acquiring new information and skills regarding the patient and his disease, also better opportunities to indulge and participate in recreation, more time for leisure besides ensuring a healthier physical environment in terms of pollution, noise, traffic, and climate besides transport facilities.

Thus it can be concluded that caregivers belonging to high economic stratum enjoy a better QOL as compared to caregivers from low economic stratum due to the comforts that their financial security brings into their life proving the hypothesis for this study correct. Results also proved that economic differences are a very prominent and significant variable influencing care giving and caregivers in varied ways. With such results, it can be said that economic differences do indeed play a critical role in care giving and have a major impact on self-perception born out of the role essayed and privileges enjoyed by the care givers be it in terms of financial stability and security in their life. As such a critical review of the QOL and economic variability in care givers needs to be undertaken with the realization that the population of caregivers is a dynamic one where at least a third of all people will fulfill a carers role at some point in their lives. With nearly 80% of all long-term care now provided at home and with every third individual above 70 years of age in India suffering from the crippling disorder OA of the knee, it is a well-recognized fact that caregivers are and will continue being the backbone of long-term health care systems across the world as such care givers in the developed countries are now being viewed as an important resource and being given recognition in health and social care

policies, it's high time that their needs and requirements be prioritized with urgency to ensure that they too stay healthy as they do their duties and succeed in maintaining a balance at all critical times in their lives as well.

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THE ROLE OF CONNECTEDNESS TO NATURE IN ADOLESCENTS' QUALITY OF LIFE

Alena Slezackova* and Jirina Liliana Doubkova**

ABSTRACT

This study deals with human relationship to nature and the positive influence of nature on selected aspects of his/her quality of life, primarily on life satisfaction and meaningfulness of life. The research study consists of quantitative and qualitative survey. The research sample consists of 171 respondents aged from 18 to 25 years. The quantitative part of research focuses on mapping the relationship between degrees of human connectedness to nature and measures of life satisfaction, meaningfulness of life, rumination, reflection, actual level of the contact with nature and the location where respondents grew up for most of their childhood, be it rural, suburban or urban. We used methods Satisfaction With Life Scale (SWLS), Connectedness to Nature Scale (CNS), Meaning in Life Scale (MLS), and Rumination-Reflection Questionnaire (RRQ). Obtained data were analysed by both parametric and distribution-free tests. Besides other things, the results show that the level of connectedness to nature correlates moderately strongly with reflection and they both together predict meaningfulness of life independently of the influence on life satisfaction. In the qualitative part of the study, answers to the question, what the natural world means to young people are given.

Key Words: Quality of Life, Life Satisfaction, Meaningfulness, Nature, Positive Psychology, Ecopsychology.

The starting point of our argument is the worsening state of the environment in combination with a somewhat deformed relationship between individuals and

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their natural world. We look at the natural environment and an individual's relationship with nature as key and complex factors affecting the quality of human life.

Environmentalists (Berry, 1997; Leopold, 1949; Orr, 1994) have long maintained that humans derive physical and psychological benefits from spending time in the natural world. The past two decades of research in Ecopsychology have revealed that exposure to the natural world decreases negative behaviours and states (aggression, anxiety, depression, illness) and increases positive ones (positive affect, health, cognitive capacity.) A systematic overview of research studies, theories and practices dealing with the impact of nature on the quality of an individual's life has been given by various scholars (Maller et al., 2002; Pretty et al., 2009; MIND, 2007; Newton, 2007; Health Council of the Netherlands and Dutch Council for Research on Spatial Planning, 2004). The recent study of Rathee & Singh (2008) demonstrated that subjects living in air polluted areas displayed higher psychological distress (low well-being) and low perceived general health.

Humans have lived the vast majority of their lives surrounded by nature, belonging to the broader natural community in very real ways, feeling vital and important connection with nature and experiencing in everyday life that they are part of the broader natural world. In geological time, it is only a tick of the clock that we have spent in highly urban settings surrounded mostly just by artificial things created by man and living in relatively densely populated areas (Pretty et al. 2009). The need to belong (Baumeister & Leary, 1995) more broadly as well as the need for connectedness to others enriches the social psychological perspective in important ways. This study aims to show the psychological significance of the human-nature relationship not just for well-being of nature, but for humans as well.

More recent studies by Schultz, (2001), Mayer & Frantz, (2004), Mayer et al. (2009) and Rantanen, (2009) have claimed that an interest in preserving nature and ecological activism tend to be influenced by the extent of one's experiencing connectedness to nature. Nature connectedness is characterized as a personal attitude towards nature, that is, to what extent respondents feel being a part of nature and in a connection with the natural world (Mayer et al., 2009). Recent studies have proved there is a connection between spending time in nature and experiencing positive emotions and the ability to reflect on one's life problems (Mayer et al., 2009). They have also shown that nature connectedness is in a negative relationship with consumerist lifestyle ($r = -0.36, p < 0.01$) and that it significantly relates to perspective-taking ability ($r = 0.51, p < 0.01$).

The time spent in nature helps in setting oneself free from personal problems, realising one's sensory perception and giving a fresh look at personal issues. Research conducted by Feral (1998) supported the opinion that if we project

ourselves to the broader community of nature a feeling of our connectedness to both nature and others will occur. Research articles presented by Davis (1998), Maller et al. (2002), Jordan (2009) and Herzog et al. (1997) have shown that nature often serves as a starting switch for spiritual experiences or as a suitable environment where the spiritual side of an individual, including mindfulness and reflection, is stimulated. A study of Tiwari & Kumar (2012) specially examines the relevance of complementary nature and the efficacy of religiosity for the happiness associated with rural and urban environments. The authors found out that highly religious subjects tend to be happier and those who live in rural areas display greater religiosity than their urban counterparts. Carlson et al. (1981) and Rogers et al. (1988) in their textbooks on rural life confirm this consistent relationship. Kahn and Kellert (2002) claim that an early experience with nature may bring personal meaning to an individual's life. Nature secretly gives evidence to an existence of some higher order and mysterious sense. Consumerist lifestyle, an accelerated rate of life is linked by various scholars Tavel, 2009; Frankl, 1997) with a feeling of emptiness and meaninglessness. The feeling of nature connectedness may also serve as a counterbalance to narcissism and consumerism.

The questions of quality of life, well-being, the importance of positive emotions, meaningfulness are today subject to research within the field of Positive Psychology. Positive Psychology further studies positive and favorable character and personality traits, advantages and the flip sides of positive way of thinking and it also addresses the question of good character and morality (Diener, et.al 1985; Seligman & Csikszentmihaly, 2000; Snyder & Lopez, 2002; Keyes & Haidt, 2007; Linley & Joseph, 2004; Kumar & Yadav, 2011; Slezackova, 2012).

Subjective well-being (SWB) is defined by Diener et al. (1985) as a long-term and on lasting emotional state in which overall satisfaction with one's life is reflected.

Within the field of Positive Psychology, there is an area dealing with the meaning of life, that is, with personal goals, values, and their realisation (Emmons, 1999). Reker and Wong (1998) define life meaningfulness as an awareness of an order, cohesiveness, context and purpose in one's existence, looking for and realisation of one's value goals – and all this accompanied by a feeling of fulfilment.

Recent studies show that higher level of self-awareness depends, on the one side, on functional state of mindfulness (Snyder & Lopez, 2002, Germer et al., 2005, Kabat-Zinn, 2003 and Davidson et. al., 2003) which contributes to subjective well-being, and on the other side, is simultaneously associated with higher levels of psychological distress. Trapnell and Campbell (1999) have been studying this self-absorption paradox in recent years. They designed Rumination-Reflection Questionnaire (RRQ). Rumination was defined as unintended reflection

on oneself, primarily focused on past events. The fact that some thoughts tend to reappear, repeat and in most cases are unwonted is the primary characteristic traits of rumination. Reflection is then, in contrast to rumination, understood as a form of focusing on oneself; it springs from curiosity and is accompanied by the joy of learning.

When speaking about the awareness of our own processes happening within ourselves we should also explain the term mindfulness, a term currently discussed in Positive Psychology. Mindfulness might be described as full understanding and open acceptance of everything we perceive in the present continuous reality. If we are aware of ourselves, we can actively learn about the processes regularities of what we experience, personal characteristics, options and values of our own existence. In a consequence, we will be able to adapt in a rather meaningful way to and engage in our conduct regulation (Brown & Ryan, 2003; Brown & Cordon, 2008 and Khosla, 1994). Our examination and understanding of problems and processes in the way they really are help to develop the real essence of an individual constituted by such qualities as empathy, altruism, a good relationship with another individual and the ability to look optimistically at life and other people (Singh & Modi 2011; Kumar & Yadav, 2011). In recent study Nangia & Sharma (2012) focused on examining the clinical applications of mindfulness. Authors revealed clinically significant reduction in the severity of depression and considerable to significant improvement in acceptance, mindfulness skills, spiritual intelligence and coping. The findings of the investigation of Mittal & Nathawat (2012) and Vignes (1997) suggested a significant positive effect of insight meditation or mindfulness on variables of psychological well-being, eudaimonic well-being, life satisfaction, spirituality and mental health.

METHOD

Objectives

Our research paper is a reaction to the call for a more intense connection between psychology and the question of preservation of human development. We try to show that an individual's personal relationship with nature is an important topic within the theories of Positive Psychology. Our research poses the question of the impact of individuals' feelings of nature connectedness on their quality of life, primarily on life satisfaction and meaningfulness, reflection and rumination. It also asks the question whether the fact that an individual spends time in the natural world correlates with their feelings of nature connectedness. In the qualitative part of our paper, we specify and analyze what value nature has for young people on the verge of adulthood.

Hypothesis

- H1: Individuals feeling a higher degree of nature connectedness show a higher degree of life satisfaction.
- H2: Individuals feeling a higher degree of nature connectedness show a higher degree of life meaningfulness.
- H3: Individuals feeling a higher degree of nature connectedness show
 - a) a higher degree of reflection
 - b) a lower degree of rumination.
- H4: Individuals who have grown up in the countryside differ in their feeling of nature connectedness from individuals who have grown up in cities.
- H5: Individuals surrounded by natural world have a higher degree of nature connectedness.

To enhance our research, we included into our questionnaire an open question: "What does nature mean to you? What significance does natural world have for you?"

Sample

Our sample was made up by 171 individuals in total, aged between 18 and 25 years old, 109 women and 60 men. The sample was made up by students from various levels of education (vocational schools, high schools, grammar schools, universities) with various specializations. Further, we inquired about other details of the respondents' lives: the environment they stay most often (village, town or city), the place where they grew up (village, town or city), how often they go out into natural environments, their marital status and their state of health.

The age period of the respondents comprising the sample described in our paper is delineated and defined differently by different scholars. The majority of the scholars describe the 18-25 period as adolescence, late adolescence or early adulthood. Adolescence is viewed as the key transition period between childhood and adulthood. Adolescence is quite often a period of personal adjustment and stress and previous research has found out that adolescents are vulnerable to the negative effects of stressful life events (Brown & Lawton, 1986). Arnett (2004) specifies the definition of this age period in industrially developed countries as "emerging adulthood". This period of emerging adulthood (transition to adulthood) is described by five principal features: feeling in-between, self-focused orientation, instability, possibilities and identity explorations as in clarifying one's relationship to oneself, to others and to life as such (Arnett, 2004).

Tools

Nature connectedness was assessed by Connectedness to Nature Scale (CNS) developed by Mayer & Frantz (2004) who assessed individual emotional

level of connectedness to the natural world. An abridged scale was comprised of twelve statements of this kind: "I think of the natural world as a community in which I belong", "Like a tree can be part of a forest, I feel embedded within the broader natural world", "I often feel a kinship with animals and plants."

To find out about our respondents' life satisfaction we chose *Satisfaction with Life Scale (SWLS)* method developed by Diener, Emmons, Larsen and Griffin (1985). The scale comprises of five items and defines an overall life satisfaction.

To assess the degree of life meaningfulness we used an 18-item *Life Meaningfulness Scale (LMS)* (Halama, 2007). It is an original Slovak measure drawn from Reker and Wong's three-component model of meaning. There are 18 items and it measures the general level of meaningfulness as well as three dimensions – level of meaning in cognitive, motivational and affective area.

To assess reflection and rumination we used *Rumination-Reflection Questionnaire (RRQ)*, developed and verified by Trapnell and Campbell (1999). The scale assesses two different types of self-conscious thoughts. Rumination is defined by the authors as the neurotic, anxiously self-conscious focus on oneself. Rumination Scale includes statements as follows: "I always seem to be rehashing in my recent things I've said or done to others", "Long after argument or disagreement is over with, my thoughts keep going back to what happened". Reflection is defined as curious inquiry into oneself. Reflection items include: "I often look at how I relate to others, in philosophical ways", "I love exploring my inner self." Both Rumination Scale and Reflection Scale are made up by twelve statements.

All four scales used in our questionnaire (that is, CNS, RRQ, SWLS, LMS) are comprised of statements assessed on a five-point scale running from "I disagree completely" to "I agree completely". The scales proved to be reliable and accurate.

Procedure

In the quantitative part of our research to assess the obtained data we used the software for statistical data process and analysis, Statistica and SPSS. In the qualitative part, we used content analysis, which we approached from various angles. When analysing the respondents' answers to open questions on their attitude to and meaning of natural world for them, content analysis was used. For an *a priori* construction of categories Kellert's (1996) nature attitude typology was used.

RESULTS AND DISCUSSION

The number of valid answers was 169 (N=169). With the help of ANOVA test, we found out that the variables of age, education and health state had no significant influence on the respondents' connectedness to nature. By applying a

t-test on independent samples, a statistically significant gender difference occurred only on the rumination scale at 1% level of significance, with the higher degree of rumination found in women.

Table 1. Mutual correlation between variables

	CNS-R	SWLS	LMS	RUMIN.	REFL.
CNS-R	1.00	-0.02	0.19**	0.33**	0.52**
SWLS	-0.02	1.00	0.64**	-0.25**	0.01
LMS	0.19**	0.64**	1.00	-0.16*	0.23**
RUMIN.	0.33**	-0.25**	-0.16*	1.00	0.44**
REFL.	0.52**	0.01	0.23**	0.44**	1.00

** Significant at .01 level

* Significant at .05 level

Within mutual correlations between variables, without the other variables influence being checked, a narrow link between life satisfaction and life meaningfulness was found ($r = 0.64, p < 0.01$). Although reflection and rumination correlate moderately strongly with each other ($r = 0.44, p < 0.01$), reflection, contrary to rumination, was found in a positive relationship with meaningfulness ($r = 0.23, p < 0.01$). Further, from the correlation matrix we observed a negative correlation between life satisfaction (SWLS) and rumination ($r = -0.25, p < 0.01$). There is, however, no correlation between life satisfaction and reflection. The correlation between rumination and life meaningfulness ($r = -0.16, p < 0.05$) was insignificant. The correlation turned out to be negative.

H1: The mutual correlation did not prove the first hypothesis. The individuals who feel a higher degree of nature connectedness do not show a higher degree of life satisfaction. A step-wise regression analysis further shown that SWLS independently from other variables explains 41% difference in the variable LMS. Other variables CNS-R, rumination, reflection which significantly overlap one another, independently from SWLS, explain 8.6% difference in LMS.

H2: The second hypothesis was proved only partially. Regression analysis shown that the degree of life meaningfulness correlates with the degree of nature connectedness in dependence with other predictors used in our research, particularly with reflection. By a multiple regression analysis it was found out that the degree of life meaningfulness is predicated above all by the degree of life satisfaction ($\beta = 0.6, p < 0.01$), reflection ($\beta = 0.25, p < 0.01$) and partially by rumination ($\beta = -0.17, p < 0.05$). CNS-R ($\beta = 0.12, p < 0.06$) proved to be a marginal predictor, from the statistical perspective it is not considered as a significant value. Life meaningfulness and reflection are in a positive relationship. Life meaningfulness and rumination are in a negative relationship.

- H3a:** The first part of the third hypothesis was proved. Regression analysis found out that the degree of reflection is partially predicated by the degree of connectedness to nature ($\beta = 0.35$, $p < 0.01$).
- H3b:** The second part of the third hypothesis was not proved. Regression analysis found out that the individuals feeling a higher degree of nature connectedness do not show a lower degree of rumination. Regression analysis found out that the degree of rumination in respondents is influenced above all by the degree of reflection ($\beta = 0.40$; $p < 0.01$), life meaningfulness ($\beta = -0.23$; $p < 0.05$) and insignificantly by nature connectedness ($\beta = 0.16$; $p < 0.05$).
- H4:** The fourth hypothesis was proved. By a one-factor analysis of the dispersion it was found out that individuals differ from one another in the extent of their nature connectedness according to the place they grew up ($F(2.167) = 3.35$, $p = 0.04$). Those who grew up in the countryside have a higher degree of nature connectedness. The difference is not significant though.
- H5:** The fifth hypothesis was not proved. By a one-factor analysis of the dispersion the extent of nature connectedness in those respondents who live in the city and those who live in the village was not found. By using the Spearman's correlation, it was found out that the frequency of walking depends to a certain degree on the degree of the individual's feelings of nature connectedness. Those individuals who walk more frequently have a higher degree of nature connectedness.

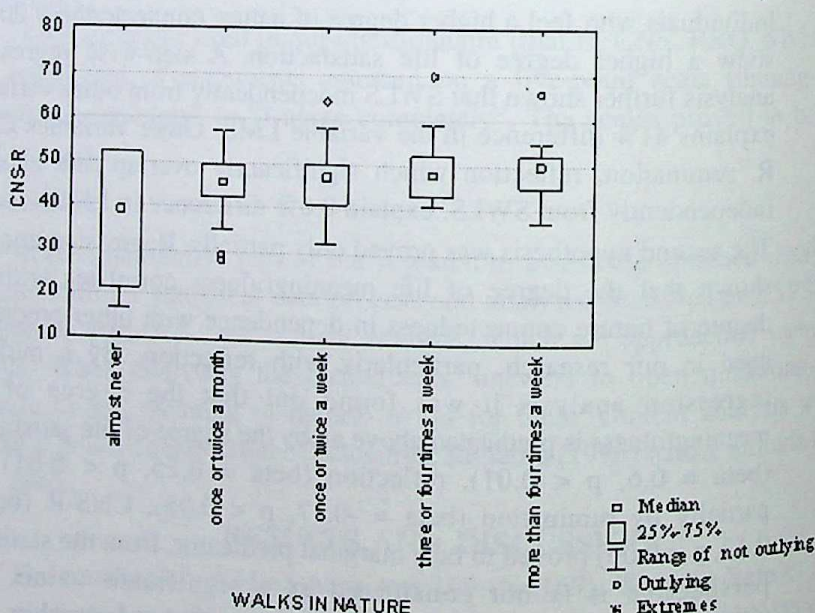


Figure 1: The relation between CNS-R and the walking in nature frequency.

In our research, other interesting results came up. By analysing the dispersion it was found that the individuals who grew up in the countryside show a higher degree of life meaningfulness than those who grew up in cities (with more than 100 000 citizens).

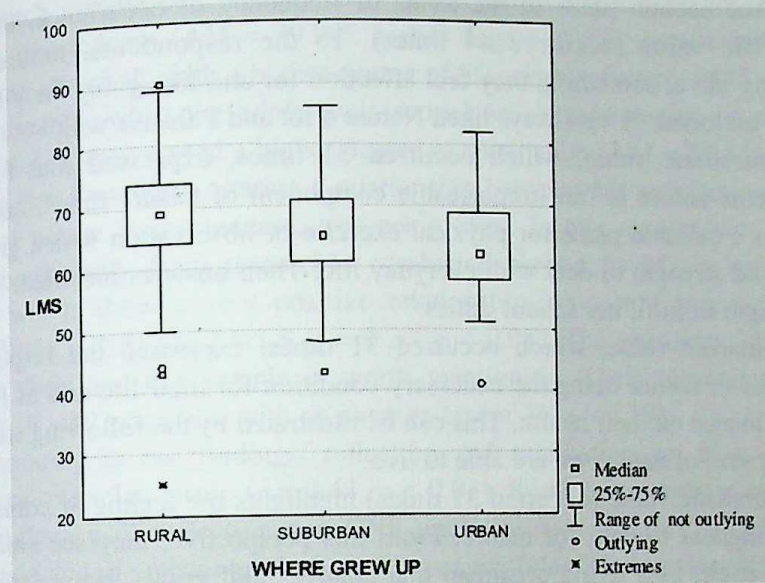


Figure 2: The dispersion of LMS degree according to the place where the respondents grew up.

The open question "What does nature mean to you? What significance does natural environment have for you?" was answered by 141 respondents, that is, 82%. For an *a priori* construction of categories Kellert's (1996) nature attitude typology was used.

As a result from his 20 year-long research, Kellert (1996) has identified a typology of values of nature: Aesthetic – physical attraction and beauty of nature, Dominionistic – mastery and control of nature, Humanistic – affection and emotional attachment to nature, Moralistic – spiritual and ethical importance of nature, Naturalistic – immersion and direct involvement in nature, Negativistic – fear and aversion of nature, Scientific – knowledge and understanding of nature, Symbolic – metaphorical and figurative significance of nature, Utilitarian – material and practical importance of nature. The following values are listed according to their frequency of occurrence.

Aesthetic value occurred 91 times. Aesthetic features of natural environment and their arrangement renewed mental peace in the respondents. Nature is also perceived as a place where they can rest at easy, relax, calm down and be still. Into this category fall also such statements expressing the concept of nature as a refuge from pressure and bustle of the city, a place that helps them unwind, perceive and admire colourful beauty, harmony, hope and joy of life. The

respondents' statements were as follows: "Nature is a place showing beauty, meaning, sense and unusual experiences to an individual living in the city." "I don't need to think about anything and I just enjoy the beauty around." "Nature fascinates me." "I admire nature's complexity and the beauty of natural laws".

At the second place in the terms of frequency of occurrence, there was Humanistic value (occurred 44 times). To the respondents, nature means something alive, something they feel affection for and like going back to. Their answers included: "I've always liked Nature a lot and I always will."

Naturalistic value, which occurred 31 times, expressed that for some respondents nature is "an irreplaceable component of leisure time", and that it serves as a suitable place for physical exercise or observation which give them energy and strength to deal with everyday life. Their answers included: "It gives me strength to fulfil my school duties."

Utilitarian value, which occurred 31 times, expressed the respondents' awareness of nature being the necessary condition for their life and of having a great influence on their health. This can be illustrated by the following statement: "It is because of nature we are able to live."

Moralistic value (occurred 31 times) highlights the feeling of commitment and willingness to care for nature. From this perspective, they see nature as a value in itself, as a living organism that changes and grows. Nature makes the respondents realize sense, they held it in esteem, and they respect it and perceive it as a valuable gift. Nature also has a spiritual meaning for them. Their statements include: "Nature is a place where I feel at home and close to God." "Nature is what surrounds us, that what is a part of us, that what transcends us and fulfils us"; "Our place that we pass from one generation to the next is in the midst of nature. Those who protect nature, protect themselves."

The respondents mentioned Symbolic value 15 times. This means nature has a meaning for them in the sense of a space where they like to think, sort out their thoughts, listen to, a place where they can get a fresh and detached point of view, a chance of setting themselves free from their problems and a place from which they can draw new inspiration. Their statements included: "Nature is something we can always go back to, a place where we can throw our problems to the wind and calm down, because there we realize that our problems are not that big as they seemed," "Nature is a place where I can listen to myself peacefully."

The respondents mentioned Negativistic value as well (6 times) as they were aware of its inclemency; they mentioned, among others, "cold", "loneliness", "fear".

Scientific value was mentioned three times. According to this value, the natural environment is seen as a source of knowledge, or learning a lesson: "I admire nature's intelligence and wit, and the way nature has developed throughout the years."

Dominionistic value, when nature is experienced as something which gives the feeling of power and supremacy, was mentioned by only one respondent.

When the final scale results are compared with median values from each scale and with normal dispersion graphs, the adolescents and young adults from our research sample can be seen as a group with a slightly higher degree of nature connectedness ($AM = 39.94$), higher degree of life satisfaction ($AM = 16.38$) but, above all, with a higher degree of life meaningfulness ($AM = 66.06$). In the research, whilst the adolescents scored an average degree of reflection ($AM = 36.13$), they scored a higher degree of rumination ($AM = 39.84$).

The first hypothesis, stating a relationship between life satisfaction and the degree of nature connectedness, was not proved. In this respect, our findings differ significantly from researches conducted abroad by Mayer and Frantz (2004), which show a very positive relationship between Connectedness to Nature Scale (CNS) and SWLS ($r = 0.20$, $p < 0.05$). The significant difference between their and our sample is worth mentioning. Their respondents were between 14 - 89 years old, with an average age of 36 ($SD = 19$).

According to our findings, reflection and rumination are in a medium-strong positive relationship ($r = 0.44$, $p < 0.01$). Rumination without any traces of the influence of reflection and CNS predicate in a negative way both life satisfaction and life meaningfulness, with meaningfulness being significantly less predicated. Though there is no relationship between reflection and the feeling of nature connectedness, according to our research; they do, however, independently from life satisfaction, explain part of the life meaningfulness dispersion. An important result revealed in our research is that nature connectedness together with reflection can, to a certain degree, enhance the feeling of one's own life meaningfulness even in those individuals who do not feel life meaningfulness. Reflection turned out to be in our research a significant predictor of both the degree of life meaningfulness and of nature connectedness.

Our research therefore shows how important it is to cultivate the ability to perceive, learn about oneself and the world around, not only for a renewal of our connectedness to the natural environment, but also for the prevention of neurotic mulling over oneself, negative states of natural environment or society leading to the loss of personal life satisfaction. For the promotion of reflection, the human factor is undoubtedly needed (Khosla, 1994; Kumar & Yadav, 2011).

The qualitative part shows that nature for the adolescents is personally important and has a positive influence on the overwhelming majority of the respondents. In addition to material values, as a place for leisure time and activities, which have a good influence on their health, nature gives them a place where they can escape the city turmoil, noise, or polluted air; a place where they can rest, calm down, ease their mind; a place where they can structure their thoughts quietly and get new strength to deal with everyday life. Nature came to be a place where they find their roots; they feel naturally and freely there. They

see nature as a living organism and what is apparent from their responses, they feel to be in a personal relationship with "something", something that interests them, transcends them and fulfils them; something whose laws need to be adopted.

According to our findings, the individuals who grew up in the village had a higher degree of connectedness to nature and higher degree of life meaningfulness as well, contrary to those who grew up in the city. Our research proved the claim that for the growth of nature connectedness childhood is crucially important when, according to many authors, the bases for one's relationship with nature are established (Pretty, 2009).

When evaluating the results, it must be taken into consideration that they might be distorted and limited by factors, we could not exclude. To find out about the degree of the each factor, we used self-rating methods, which put demands on the respondent's self-reflection ability. CNS and RRQ methods were used on the Czech population for the first time; therefore, in subsequent researches, their validity and re-test reliability should be further proved. Because of the limited scope of our research and our effort not to overwhelm our respondents with too many questions we measured the influence of the environment where the individuals grew up by only one single item.

Natural environment turned out to be in our research a positive bearer and reflection of important values. The natural environment is clearly an important part in our optimal self-awareness of the world, and it seems to encourage reflection and offers wholesome options for the healthy development of the individual.

In today's fast moving world we often tend to make happiness over complicated. Most people are governed by the understanding that happiness can be derived by doing something on a grand scale, from making a big fortune and by showing off high status in society. However, if we are tense we cannot make use of the potential of mind (Tiwari & Kumar, 2012). It is shown that happiness can be attained from simple and unpretentious things, when one is able to connect with the best things in oneself, in one's relations and see the good in others, in the ambient environment, in life values that might transcend Man.

The emergence of Positive Psychology and Ecopsychology is not just the result of scientific expedition in the last few years but the need of current scenario wherein the lifestyle is leading to selfishness and alienation between the more and the less fortunate and eventually to chaos and despair. Both disciplines contribute with their findings to clinical, therapeutic, pedagogical and social practice. We tried to enrich these two fast developing movements by new approaches, to show their possibilities, context and cooperation with other scholarly fields. Negative motivation tends to lead, of course, to exclusion of the heard and to a fixation on behavioural stereotypes. Psychology, therefore, should

not only protect children and young adolescents from uncontrollable anxiety, feeling guilty of doing harm and destroying nature, but it also should develop new ways, ways which would increase the quality of life and encourage the feeling of meaningfulness in one's work and one's own life value.

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COMPARISON BETWEEN SPIRITUAL BEHAVIOR AND SLEEPING BEHAVIOR OF DIABETICS AND NON-DIABETICS

Shraddha Sharma* and Ira Das**

ABSTRACT

The research was conducted with the purpose to study the spiritual behaviour and sleeping behaviour among diabetics and non-diabetics. It was hypothesized that non-diabetics spend more time on spiritual activity and have healthier sleeping behaviour than diabetics. The sample consisted of 200 diabetics and non-diabetics in the age range of 40-60 years. The data was collected with the help of self-constructed questionnaire. t test was applied to study the significance of difference between the spiritual behaviour and sleeping behaviour of diabetics and non-diabetics. Results showed that mean score for spiritual activity behaviour is 5.27 and 20.28 for diabetics and non diabetics respectively. Similarly, for sleeping behaviour mean score is 3.64 and 3.24 for diabetics and non diabetics respectively. t value for spiritual behaviour is 3.96 which is significant at .01 level and for physical activity behaviour, t value is 4.97 which is also significant at .01 level. Results revealed that non-diabetics spend more time on spiritual behaviour and have healthier sleeping behaviour than diabetics. Therefore, it can be concluded that healthy sleeping behaviour and high spiritual behaviour, which leads to better well being, diminishes chances of occurrence of diabetes.

Key Words: Spiritual Behaviour, Sleeping Behaviour, Diabetics & Non-diabetics

Diabetes is a clinical syndrome characterised by hyperglycaemia due to deficiency or diminished effectiveness of insulin, a disturbed chemical balance in

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the body. The diabetes is a chronic condition of impaired carbohydrate, protein and fat metabolism that results from insufficient secretion of insulin or from insulin resistance. Diabetes is associated with a thickening of the arteries due to the build up of wastes in the blood. Diabetes has also been associated with nervous system damage, including pain and loss of sensation. There are two major type of diabetes mellitus, (i) insulin-dependent diabetes mellitus (IDDM) or Type I diabetes and (ii) non-insulin dependent diabetes mellitus (NIDDM) or Type II diabetes.

Type 2 diabetes mellitus is characterized differently due to insulin resistance or reduced insulin sensitivity, combined with relatively reduced, and sometimes absolute, insulin secretion. The defective responsiveness of body tissues to insulin almost certainly involves the insulin receptor in cell membranes. In the early stage of type 2 diabetes, the predominant abnormality is reduced insulin sensitivity, characterized by elevated levels of insulin in the blood. At this stage hyperglycaemia can be reversed by a variety of measures and medications that improve insulin sensitivity or reduce glucose production by the liver. As the disease progresses, the impairment of insulin secretion worsens, and therapeutic replacement of insulin often becomes necessary.

The high risk factors for diabetes are high familial agitation, obesity and poor life style. It has been found in many studies that life style plays an important role in the occurrence of depression.

Diabetes mellitus is a chronic condition. Over time, diabetes can lead to blindness, kidney failure, and nerve damage. These types of damage are the result of damage to small vessels, referred to as microvascular disease. Diabetes is also an important factor in accelerating the hardening and narrowing of the arteries (atherosclerosis), leading to strokes, coronary heart disease, and other large blood vessel diseases. This is referred to as macrovascular disease. People with diabetes can lead a full life while keeping their diabetes under control. Lifestyle modifications (changes in day-to-day habits) are an essential component of any diabetes management plan.

Lifestyle includes several aspects such as physical activity behaviour, sleeping behaviour, eating behaviour, spiritual behaviour etc. Each and every aspect of life is important in making individual physically as well as mentally healthy. Healthy eating habits, quality sleep, exercise and physical activities, participation in spiritual activities improves the blood sugar control and improves the metabolic functions of body, further it can slow the progression of long-term complications. Multiple small changes can lead to reduction in control of various diseases like cardiovascular disease, diabetes, metabolic syndrome etc.

Spiritual activities are an important part of life. It provides people with a sense of purpose and guidelines for living. Spiritual practices tend to improve coping skills and social support, foster feelings of optimism and hope, promote

healthy behaviour, reduce feelings of depression and anxiety, and encourage a sense of relaxation. By alleviating stressful feelings and promoting healing ones, spirituality can positively influence immune, cardiovascular (heart and blood vessels), hormonal, and nervous systems (Larson & Larson, 1991; D'Souza & Rodrigo, 2004; Parsian and Dunning, 2009).

Sleep is an essential part of our daily living. Sleep deprivation and too much of sleep both can have negative effect on health so it is of great importance that individual should have healthy sleeping behaviour. Sleep disturbances may intervene with the biological and physiological processes in human body leading to the development of metabolic dysfunction which can further lead to diseases like diabetes, cardiovascular diseases, depression etc. If individual adopts healthy life style then it may make him/her physically as well as mentally healthy.

Diabetes requires a lifelong management plan, and persons with diabetes have a central role in this plan. Lifestyle modifications are an opportunity for diabetics to take charge of their health. Therefore, it is important to learn as much as possible about diabetes and to take an active role in making decisions about healthcare and treatment.

METHOD

Objectives

- To study the spiritual activity behaviour among diabetics and non-diabetics.
- To study the sleeping behaviour among diabetics and non-diabetics.

Hypotheses

- Non-diabetics spend more time on spiritual activity than diabetics.
- Non-diabetics have healthier sleeping behaviour than diabetics.

Sample

The sample consisted of 200 type 2 diabetics and non-diabetics in the age range of 40-60 years. Group I consisted of 100 type 2 diabetics and Group II consisted of 100 non-diabetics. Subjects were selected from Agra and Gwalior cities. Both the groups were matched in terms of age, sex and socio-economic status. Subjects having any other psychological and physical disorder were excluded from the sample.

Tools

Diabetes was diagnosed on the basis of any MBBS doctor's (pathologist's) report obtained during last six months. If the blood sugar level after fasting was beyond the normal value of 70-100 mg/dl, it was diagnosed as diabetic.

To measure spiritual activity behaviour and sleeping behaviour Life Style Scale (Section B and C) developed by Das & Sheenu (2009) was used. It

consisted of 15 items (Spiritual Activity Behaviour= 8 Items and Sleeping Behaviour= 7 Items). Test retest reliability of Spiritual Activity Behaviour section is .69 and internal consistency is .72. Test retest reliability of Sleeping Behaviour section is .98 and internal consistency is .55.

RESULTS AND DISCUSSION

Mean and S.D. were also calculated and *t* test was applied to study the significance of difference between the spiritual behaviour and sleeping behaviour among diabetics and non-diabetics.

Result Table-1 shows that the spiritual behaviour mean score for non-diabetics (20.15) and diabetics (5.06). To find the significance of difference between the spiritual behaviour between diabetics and non-diabetics *t* test was applied. Result Table No.-1 indicates that *t* value for spiritual behaviour is 3.65 that is significant at .01 level. It shows that there is significant difference between the spiritual behaviour among diabetics and non-diabetics. It confirms the findings that non-diabetics spend more time on spiritual activity than diabetics. Similar results were also shown with the help of figure also.

Table 1: Showing the value of '*t*' between the Spiritual Behaviour among Diabetics and Non-Diabetics

Groups	N	Spiritual Behaviour Scores		SE _D	' <i>t</i> ' Value
		Mean	S.D.		
Non-Diabetics	100	20.15	3.74	.22	3.65**
Diabetics	100	5.06	2.23		

**= Significant at .01 level

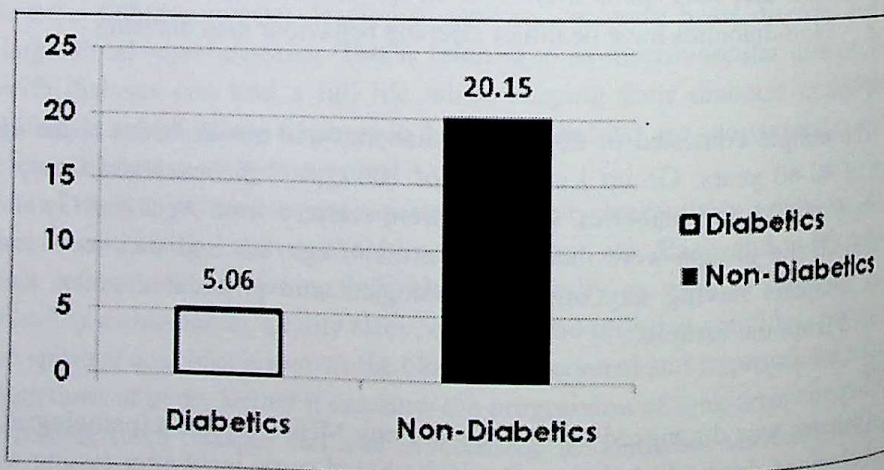


Figure 1: Spiritual Behaviour among Diabetics and Non-Diabetics

Result Table 2 shows the mean scores for sleeping behaviour among diabetics and non-diabetics. It can be observed from Result Table 2 that diabetics

have lower mean score (14.67) for sleeping behaviour than non-diabetics (mean score=23.76). It can be observed from Result Table 2 that t value in respect of sleeping behaviour is 2.63 that exceeds the critical value at .01 level. Thus, it is significant. It shows that there is significant difference between the sleeping activity behaviour among non-diabetics and diabetics. Figure-2 is also showing the similar results that non-diabetics have healthier sleeping behaviour than that of diabetics.

Table-2: Showing the value of ' t ' between the Sleeping Behaviour among Diabetics and Non-Diabetics

Groups	N	Spiritual Behaviour Scores		SE _D	' t ' Value
		Mean	S.D.		
Non-Diabetics	100	23.76	3.42	.26	2.63**
Diabetics	100	14.67	3.65		

**= Significant at .01 level

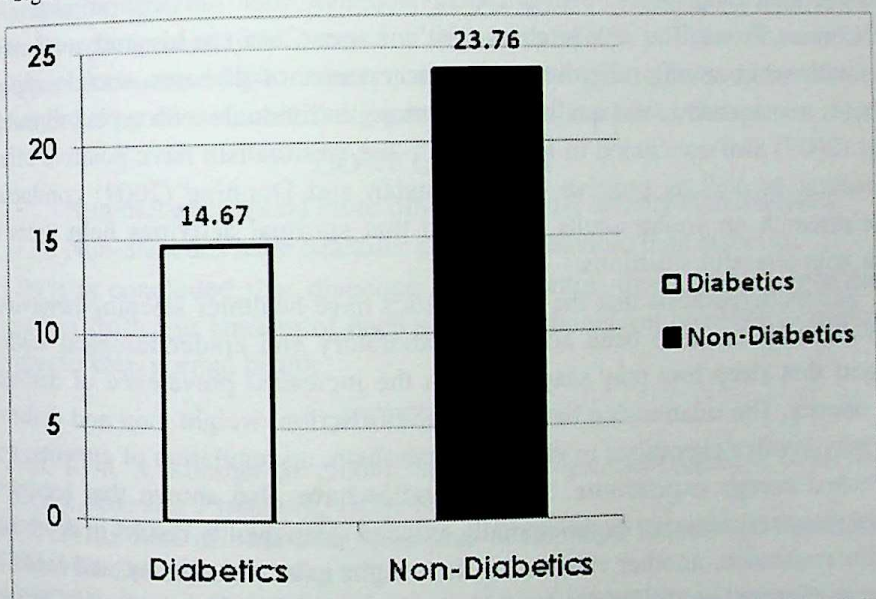


Figure 2: Sleeping Behaviour among Diabetics and Non-Diabetics

The results of the present study lead to the acceptance of the first hypothesis that non-diabetics spend more time on spiritual activity than diabetics. Spirituality gives a more positive outlook and a belief for the future. When people suffer ill health spiritualism helps them because their beliefs comfort them, help them to be more optimistic and they are more likely to achieve health goals, and believe that they will get better. There are many previous researches which confirm the findings of the present study. Strong scientific evidence suggests that individuals

who regularly participate in spiritual worship services or related activities and who feel strongly that spirituality or the presence of a higher being or power are sources of strength and comfort to them are healthier and possess greater healing capabilities. Larson and Larson (1991) surveyed 12 years of publication of the American Journal of Psychiatry and Archives of General Psychiatry. They found that when measuring participation in religious ceremony, social support, prayer and relationship with God 92% of the studies showed benefits for mental health, 4% were neutral, and 4% showed harm. Hill and Pargament. (2003) have found in their research that people who spend more time on spiritual activity and activity related to religion are healthy.

A study of prayer use by patients showed that 47% of study subjects prayed for their health, and 90% of these believed prayer improved their health. Those who prayed had significantly less smoking and alcohol use and more preventive care visits, influenza immunizations, vegetable intake, satisfaction with care, and social support, and were more likely to have a regular primary care provider. The study concluded that those who pray had more favourable health-related behaviours, preventive service use, and satisfaction with care ('O'Connor, Pronk, Tan & Whitebird, 2005). Lager (2006) in his study examined the relationship among religious coping, acceptance of diabetes, social support, diabetes management, and quality of life among individuals with type 2 diabetes. Dyer (2007) also concluded in his research that spiritualism have positive effect on mental as well as positive health. Parsian and Dunning (2009) conducted their research on young adults and found that spiritual activities help them to cope with stressful situations.

Second hypothesis that the non-diabetics have healthier sleeping behaviour than diabetics has also been accepted. Laboratory and epidemiological studies suggest that sleep loss may play a role in the increased prevalence of diabetes and obesity. The relationship between sleep restriction, weight gain and diabetes risk may involve alterations in glucose metabolism, up regulation of appetite, and decreased energy expenditure. Several studies have also shown that recurrent partial sleep restriction or experimentally reduced sleep quality results in decreased insulin resistance, another risk factor for weight gain and obesity and leads to diabetes (Speigel et al., 2005). A study was conducted in University of Chicago Medical Centre by Leproult (2008) and it was found that suppression of slow-wave sleep (deep sleep) in healthy young adults significantly decreases their ability to regulate blood-sugar levels and increases the risk of type 2 diabetes. Study showed that reduced sleep quantity can impair glucose metabolism and appetite regulation, resulting in increased risk of obesity and diabetes. Longer periods of deep sleep are observed in physically active people and in those with an over-active thyroid gland, both associated with a faster metabolism. In contrast, people with an underactive thyroid gland, and thus a slower metabolism, enjoy fewer hours of deep sleep. Sleep deprivation is related to a number of

undesirable changes in metabolic activity, for example, levels of cortisol (hormone involved in response to stress) in the blood increase, the immune response is affected, body's ability to handle glucose diminishes, and appetite control suffers (Knutson et al., 2007). Sleep disturbances, including insufficient sleep due to bedtime curtailment and poor sleep quality, may represent novel risk factors for obesity and type 2 diabetes (Leproult & Cauter, 2010). Short sleep was associated with changes in hormones that control hunger: leptin levels (reducing appetite) were low, while ghrelin levels (stimulating appetite) were high. Effects were seen when sleep duration fell below 8 hours. This suggests that sleep deprivation is a risk factor for obesity and obesity is considered the main contributor in the occurrence of diabetes.

Spiritual activities enhance the body's natural healing ability. Spiritual activities like prayer (prayer for self and prayer for others) and altruistic behaviour positively affect the mental health of the individual, which leads to the good physical health. People who practice a spiritual lifestyle often believe that there is life after death and there is always a supreme power who is observing everyone's acts and behaviour, so unknowingly it guides them to adopt good and healthy habits. Poor sleep habits can cause one's mood to be less positive. Short or very long sleep duration and poor sleep quality have adverse effects on metabolism and hormonal processes, contributing to increment in various diseases.

CONCLUSIONS

- Non-diabetics spend more time on spiritual activity than diabetics.
- Non-diabetics have healthier sleeping behaviour than diabetics.

So it is concluded that diabetics should control their sleeping behaviour getting just sufficient amount of deep sleep and should get involved in spiritual activities to keep normal health.

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PSYCHOLOGICAL FACTORS UNDERLYING BREAST CANCER

N. Hemalatha* and O.S. Ravindran**

ABSTRACT

Breast cancer is a major public health problem affecting a large segment of women in India. The aim of the study was to examine the role of psychological factors, namely, mental adjustment, depression and quality of life in patients diagnosed with breast cancer. Sixty patients with breast cancer in two age groups, namely, 30-45 years and 46-60 years were recruited for the present study. They were assessed by the following tools: Mental Adjustment to Cancer (MAC) scale, Beck Depression Inventory-II and Quality of Life Scale (Cancer). Results were discussed using percentages and t-test. Patients in the younger age group (30-45 years) are found to be depressed, having significant reductions in their quality of life and they are adopting a negative coping style of helplessness / hopelessness.

Key Words: Breast cancer, mental adjustment, quality of life, depression.

Breast cancer is the most common cancer among women. The lifetime risk of developing breast cancer in women is 12% (American Cancer Society, 2009). The number of women diagnosed with breast cancer has increased as a result of mammography screening. In India, around 100,000 women are newly diagnosed every year (Yelole & Kurkure, 2003). The diagnosis of breast cancer is quite distressful to women with breast cancer. The major areas of psychological distress for women diagnosed with breast cancer relate to fear of death, body image concerns, dealing physically and emotionally with the side effects of treatment. Patients with breast cancer engage in multiple treatment modalities

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which can cause devastating physical, emotional and spiritual effects on patients and their families.

Depression has received the most attention in cancer patients. The prevalence of depression in patients with breast cancer is estimated at about 10% to 25%. One of the most consistent findings is the rate of diagnosis of depression in breast cancer is third after the prevalence of depression in pancreatic and oropharyngeal cancers (Massie, 2004; McDaniel, 1995).

The emotional distress and underlying depression can offer health outcomes in women diagnosed with breast cancer. Distress clearly affects quality of life (Dow et al, 2000; Ganz et al, 2003; Kenne Sarenmalm et al, 2007). In an Indian study, Pandey et al (2005) studied the quality of life in breast cancer patients using the Malayalam version of Functional Assessment of Cancer Therapy - Breast (Fact - B) questionnaire and concluded that younger women (< 45 years), women having unmarried children and those currently undergoing active treatment showed significantly poorer QOL scores in univariate analysis.

Mental adjustment is one of the most widely studied concepts with cancer patients (Grassi et al, 1993). Mental adjustment has been defined as "cognitive and behavioural response made by an individual to a cancer diagnosis" (Greer et al, 1989). Mental adjustment may include involuntary emotional reactions to threatening events. According to Berlin et al (2003), patients who adopted a coping response characterized as helplessness / hopelessness reported higher levels of psychological distress than patients who adopted a response characterized as fighting spirit. Recently, Okano et al (2004) investigated factors that are correlated with mental adjustment styles of fighting spirit or helplessness / hopelessness in women with breast cancer with a first occurrence. Fifty five participants were interviewed and completed the Mental Adjustment to Cancer scale. Factors that correlated significantly with fighting spirit were performance status and history of major depression, while the factors that correlated significantly with helplessness / hopelessness were age, pain and history of major depression.

Keeping in view of the above, the present study attempts to examine the role of psychological factors, namely mental adjustment, depression and quality of life in patients diagnosed with breast cancer. It also attempts to compare two age groups of breast cancer patients, namely 30-45 years and 46-60 years.

METHOD

Objective

The objectives were twofold:

- 1) to assess the level of mental adjustment, depression and quality of life.
- 2) to compare the level of mental adjustment, depression and quality of life in patients with breast cancer in relation to their age.

Sample

Within group design was used in the present study. The sample for the present study comprised of 60 patients with breast cancer in two age groups, namely, 30-45 years and 46-60 years. The patients who were attending the Cancer Institute, Chennai, as out-patients were recruited for the present study. The inclusion criteria were: a) diagnosis of breast cancer by the Medical Oncologist, b) female patients who are willing to participate in the study, c) educational level of 8th standard and above were included. The exclusion criteria were: a) patients with other types of cancer, b) patients who are in critical condition, c) patients with any other major physical illnesses were excluded from the study.

Table 1. Socio-Demographic Characteristics

Variables	Percentage (%)
Age (in years)	
30 - 45	50.00
46 - 60	50.00
Education	
8 - 10 th Std	43.33
11 - 12 th Std	21.67
College	35.00
Occupation	
Employed	23.33
Un-employed	76.67
Marital Status	
Single	-
Married	68.33
Widowed	16.67
Separated / Divorced	15.00
Income (per month)	
> Rs.5,000/-	33.33
< Rs.5,000/-	66.67
Number of Children	
None	51.67
1 & 2	36.67
3 & above	11.66
Family History of Cancer	
Yes	58.33
No	41.67

Table 1 indicates the percentage distribution of sample which includes the chronological age of the participants, education, occupation, marital status, income, number of children and family history of cancer. Regarding the stages of breast cancer, 50%, 46.7% and 3.3% were having stage I, II and III of breast cancer respectively in the age group of 30-45 years. In the age group of 46-60 years, 53.4%, 33.3% and 13.3% were having stage I, II and III of breast cancer respectively.

Tools

1. A Sociodemographic data sheet was developed to collect relevant clinical information about the participants.

2. The MAC scale is a widely used self-rating questionnaire for cancer patients (Watson et al, 1988). It consists of 40 items and the original factor structure classified the following adjustment styles: 'Fighting Spirit, Helplessness / Hopelessness, Anxious Preoccupation, Fatalism and Avoidance (Greer & Watson, 1987). In later studies, (Watson et al, 1991), the avoidance subscale (one item) has been omitted. In the present study, avoidance scale was excluded from scoring as it consisted of one item only. Items are given as statements and patients assent to their agreement using a four point Likert scale. Scores for the subscale are calculated by adding up the answers of the assigned items. The reliability co-efficient has been proved to be satisfactory (alpha co-efficient ranging from 0.61 to 0.81) in a heterogeneous Swedish sample of cancer patients (Nordin et al, 1999).
- 3) *Beck Depression Inventory (BDI - II)*: The BDI-II was used to measure the behavioural manifestations of depression (Beck et al, 1996). It consists of 21 item sets, each with a series of four statements. Statements describe symptom severity along an ordinal continuum from absent or mild (a score of 0) to severe (a score of 3). Depression severity scores are created by summing the scores of the items endorsed from each item set. The most recent guidelines suggest the following interpretation of severity scores: 0-13 minimal; 14-19 mild; 20-28 moderate and 29-63 severe. The BDI-II shows high internal consistency with a Cronbach alpha of 0.92 in outpatients. With regard to validity, Beck found a correlation of 0.71 between the HAM-D and BDI-II.
- 4) *Quality of Life - Cancer*: The quality of life is important health outcome measure in Oncology. The QOL-C is an 38 item questionnaire with ten factors namely, Psychological Wellbeing, Self-Adequacy, Physical Wellbeing, Confidence in Self Ability, External Support, Pain, Mobility, Optimism and Belief, Interpersonal Relationship and Self-Sufficiency and Independence. Researchers from the Psycho-Oncology department of Cancer Institute, Chennai developed an instrument to assess the quality of life of patients with cancer to suit the Indian Scenario (Vidhubala et al, 2005). Thirty-eight items were pooled from existing tools, reviews and the field trial, by which the face and factorial validity were established. The questionnaire was administered to 400 outpatients attending the cancer institute with all sites and stages of cancer. The QOL-C shows high internal consistency with a Cronbach alpha of 0.90 in out-patients. The maximum score for the questionnaire was 152 and the minimum score was 38. Based on the percentiles, the norms for the QOL-C are as follows:

88 & below	-	Significantly poor	QOL
89 - 108	-	Below average	QOL
109 - 132	-	Below average	QOL
133 - 144	-	Above average	QOL
Above 144	-	Significantly high	QOL

Procedure

After the selection of the questionnaires, the chosen sample of patients with breast cancer were administered the questionnaires. The data were collected in one session from each patient which lasted for a duration of one hour. All the patients were explained in detail about the purpose of the present study and a written consent was obtained from them. The respondents were assured of the confidentiality.

RESULTS AND DISCUSSION

The t-test was computed to find out the difference between the means. The table shows the mean scores and standard deviations of the two age groups of breast cancer patients as assessed by MAC scale. Except the factor of helplessness/hopelessness, there is no significant difference between the two groups on the remaining factors. Fighting spirit was found to be comfortable in both groups. There is significant difference between two groups with regard to helplessness/hopelessness factor. The breast cancer patients adopting the coping strategy of helplessness/hopelessness reported higher level of psychological distress. With regard to anxious preoccupation factor, there is no significant difference between the two groups. Both groups reported higher levels of cancer related worries on the anxious preoccupation factor. There is no significant difference between two groups with regard to fatalism. Both the groups were found to be more fatalistic.

Table-2. Significance of Difference between Mean Scores of the two Age Groups on Mental Adjustment to Cancer (N=30 in each group)

Factors	30 - 45 Years		46 - 60 Years		t-value	Level of Significance
	M	SD	M	SD		
Fighting Spirit	49.50	6.33	50.17	7.51	0.37	NS
Helplessness / Hopelessness	14.30	6.48	11.53	4.47	2.15	0.05*
Anxious Preoccupation	23.73	4.25	21.50	5.13	1.83	NS
Fatalism	22.10	3.45	21.13	3.28	1.11	NS

NS = Not Significant

Table 3. Shows Significance of Difference between Mean Scores of the two Age Groups on Depression and Quality of Life – Cancer (N=30 in each group)

Variables	Group	M	SD	t-value	Level of Significance
Depression	30-45 Years	21.10	9.96	4.98	0.01**
	46-60 Years	9.98	7.14		
Quality of Life-Cancer	30-45 Years	128.47	16.84	3.28	0.01**
	46-60 Years	142.53	16.40		

The table shows the mean scores and standard deviations of the two age groups of breast cancer patients assessed for depressive symptomatology using the Beck Depression Inventory-II and the quality of life scale to assess the degree of the participants' quality of life, respectively. With regard to depression, the younger age group (30 – 45 years) shows moderate level of depression. In the case of quality of life, the younger age group of breast cancer patients showing significant decline in the quality of life after the radiation therapy was initiated.

Breast cancer is the most commonly diagnosed cancer among women in India. The diagnosis, treatment, and recovery from breast cancer is highly stressful. It is a life threatening illness having considerable impact on patients' lives and also it would affect the mental adjustment of the patients to their disease. Mental adjustment comprises (1) appraisal (*i.e.* how patients perceive implications of cancer) and (2) ensuing reactions (*i.e.* what patients think and do to reduce the threat posed by cancer) (Greer et al, 1989).

Positive mental adjustment such as fighting spirit and avoidance are associated with absence of depression and anxiety, whereas negative mental adjustment such as helplessness / hopelessness, anxious preoccupation and fatalism are associated with psychological distress (Akechi et al, 2001) and a lower quality of life (Schnoll et al, 1998).

Fighting spirit has been shown to be the most beneficial coping style and associated with longer survival. Fighting spirit was found to be predictive of successful adaptation to psychological pressures (Greer et al, 1979; Moorey & Greer, 1989).

With regard to anxious preoccupation, both groups reported higher levels of cancer related worries. Anxious preoccupation is considered as a negative mental adjustment and associated with psychological distress. In the present study also, both groups of breast cancer patients reported higher level of psychological distress. The above finding is consistent with the study of Akechi et al (2001). Fatalism is also considered as negative mental adjustment. In the present study, there is no significant difference between the two groups and

they were found to be more fatalistic. Similar findings were reported by Roy (2008).

Depression is the most prevalent psychological symptom perceived by cancer patients. Psychological distress especially depression is common at the conclusion of cancer treatment. The emotional burden of breast cancer treatment is high particularly for younger women. The present study found that the younger age group (30 – 45 years) reported moderate level of depression. The above findings reflect those reported in other studies (Burgees et al, 2005; Kim et al, 2008) and indicate the importance of assessing the mental health of breast cancer patients throughout the process of their treatment.

Quality of life has been used as a primary outcome measure in recent decades. It is a complex, multi-dimensional assessment of the physical, psychological, and social well-being of individuals. The adverse effects of different cancer or treatment related symptoms and types of treatment have been associated with quality of life (Albert et al, 2004; Groenvold et al, 2007). Depression has been shown to be negatively associated with quality of life of breast cancer patients after diagnosis, at the start of treatment and post-treatment. In the present study, participants in the age group of 30-45 years experienced significant decline in their quality of life than those in the other group of 46-60 years. Similar findings were reported by number of researchers (Ganz et al, 2003; Pandey et al, 2005).

The psychological symptoms may reduce the efficacy of chemotherapy in cases of breast cancer. The psychological distress may cause stress which alters hormonal and neuronal secretions and affects the biological activity of breast cancer cells. Therefore, the early detection of psychological symptoms and provision of effective psychological treatment to reduce the distress may well maintain the effectiveness of cancer treatment.

It can be concluded that patients with breast cancer in the younger age group are experiencing moderate depressive symptoms with significant reductions in their quality of life and adopting a negative coping style of helplessness / hopelessness.

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RELATION BETWEEN PSYCHOSOCIAL STRESSORS AND LIFE SATISFACTION FOR ARMY PERSONNEL

Shivalika Sharma* and Anup Sud**

ABSTRACT

The present study aimed to investigate the relation between psychosocial stressors and life satisfaction for army personnel. The sample comprised 150 army personnel (75 Officer Ranks and 75 other ranks). The correlational analysis revealed that psychosocial stressors (total scores) as well as stressors in terms of strained interpersonal relationship, excessive responsibilities and health related problems, had a significant relation to life satisfaction for both army personnel of officer ranks as well as other ranks. Stress due to financial constraints, marriage as well as perceived threat was found to be related to low life satisfaction for army personnel of officer ranks only and adverse situation lead to the low satisfaction of army personnel of other ranks only.

Keywords: Psychosocial stressors and Life Satisfaction

Stress plays an important role in individual's life. Some take stress as a motivating factor, but others feel that it interferes with their life. In this complex society majority of stressors tend to be associated with psychological and social issues that are related to both personal and work lives.

Psychosocial stressor refers to factors in our daily lives that cause stress. These factors include such things as our interactions with others, expectations from others and own self, as well as social conditions of work etc. Some of the psychosocial stressors like financial stress (Kantak, Futrell & Sagar, 1992) (Diener & Fujita, 1995) (Oishi Shigehiro, Diener, Lucas & Sun, 1999), marital satisfaction (Gwanfagbe, Schumn, Walter, Smith & Furrow, 1997; Ahn, 2005;

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Chronic illness (Hechman, 2003), work-family conflict (Perrewe, Hochwiler & Kiewitz, 1999), socio-economic status (Gwanfagbe, Schumn, Walter, Smith & Furrow, 1997), as well as socio-demographic conditions (Ballesteros, Zamora & Ruiz, 2001) have been found to be negatively related to life satisfaction.

Stress faced by soldiers is entirely different from the stress faced by civilians, both in nature and intensity. Stress threatens emotional and psychological equilibrium of soldiers and generate the "fight and flight" response only. Stress faced by civilians generally relates to material and societal issues whereas soldiers face both physical (threat to life) and emotional stressors. Unlike civilians soldiers have to experience lack of family support in times of emotional disturbance. For Army Personnel high discipline, hierarchical and restrictive environment deter giving vent to pent up frustration. Additionally, military service is a long term commitment. Unlike civilians, soldiers cannot change job if not satisfied.

Life satisfaction is a feeling of happiness and satisfaction with one's life, present status and activities. Satisfaction with life has been found to be a counterbalance against stress in both personal as well as work aspects of life. Life satisfaction has been conceptualized as a key indicator of well-being. In judging about the satisfaction with lives, individuals set a standard, which they perceive appropriate for the circumstances of their lives (Diener, Emmons, Larsen & Griffin, 1985). It may be possible that a person is satisfied with all domains (e.g. health, wealth, marriage, education etc.) of his life but may still not be satisfied with a particular domain which he or she weighs as most important. Dissatisfaction with this particular domain may negatively affect his or her overall judgment about life satisfaction which can create stress in his or her life.

METHOD

Objective

The aim of present study is to find the relationship between psychosocial stressors and life satisfaction for army personnel.

Sample

A sample of 150 army personnel from Officer Ranks or Other Ranks (10 from each) were selected for the present purpose.

Tools used

- (a) *ICMR Psychosocial Stress Scale*: Designed by "Indian Council of Medical Research (ICMR)" New Delhi, the scale consists of 40 items which covers following areas:
Strained interpersonal relationship, excessive responsibilities, financial constraints, marriage related stress, health related problems, adverse situations and perceived threat. The reliability of the scale has been established through Cronback-Alpha ($r = .88$), split half ($r = .88$), test-retest ($r = .88$).
- (b)
- (c)

retest ($r=.72$) and internal consistency ($r=.65$) method. Internal consistency of the tool on its seven subscales ranged from .24 to .77 ($p<.05$). This further establish the content validity of the measure.

- (b) *Life Satisfaction Scale*: The life satisfaction scale, developed by (Alam and Shrivastava, 1971), consists of 60 items related to six areas viz. health, personal, economic, marital, social and job. The responses are to be given in yes or no format, indicating satisfaction or dissatisfaction. There is no time limit yet it takes about 20 minutes to complete the questionnaire. Reliability co-efficient of the scale is 0.84.

Procedure

A set of two questionnaires namely, psychosocial stressors and life satisfaction were distributed to the army personnel. All the army personnel were asked to fill each questionnaire carefully after reading the instructions given on the top of the each questionnaire.

RESULTS AND DISCUSSION

Correlation analysis on all the variables was computed separately for army personnel of officer ranks and in other ranks.

Table 1. Correlation between Psychosocial Stressor Variables and Life Satisfaction for the two groups.

Variables	Officer Ranks	Other Ranks
Psychosocial Stressors	-.333**	-.308**
Strained Interpersonal Relationship	-.319**	-.277*
Excessive Responsibilities	-.398**	-.274*
Financial Constraints	-.257**	-.201
Marriage Related Stress	-.272*	-.076
Health Related Problems	-.336**	-.359**
Adverse Situations	-.175	-.332**
Perceived Threat	-.356**	-.213

From Table 1, it can be seen that:

- Total psychosocial stressor score is significantly and negatively related to life satisfaction for officer ranks ($r= -.333$, $p<.01$) as well as other ranks ($r= -.308$, $p<.01$).
- Psychosocial stressors in terms of strained interpersonal relationships is significantly and negatively related to life satisfaction for both army personnel of officer ranks ($r= -.319$, $p<.01$) as well as of other ranks ($r= -.277$, $p<.05$).
- Psychosocial stressor due to excessive responsibilities is significantly and negatively related to life satisfaction for both army personnel of officer ranks ($r= -.398$, $p<.01$) as well as of other ranks ($r= -.274$, $p<.05$).

- (d) Psychosocial stressor due to health related problems is significantly and negatively related to life satisfaction for both army personnel of officer ranks ($r = -.336, p < .01$) as well as of other ranks ($r = -.335, p < .01$).
- (e) For only army personnel of officer ranks psychosocial stressors due to financial constraints ($r = -.275, p < .01$), marriage ($r = -.272, p < .01$) and perceived threat ($r = -.356, p < .01$) are significantly and negatively related to life satisfaction. Whereas these relationships are not evident for army personnel of other ranks.
- (f) However for army personnel of other ranks only the psychosocial stressor due to adverse situations is significantly and negatively related to life satisfaction ($r = -.332, p < .01$) whereas this relationship is not perceived for army personnel of officer ranks.

Various psychosocial stressors such as strained interpersonal relationships, excessive responsibilities, financial issues, health concerns, marital problems, adverse situations, and perceived threat have been regarded as stressors that would lower the life satisfaction (Manual of ICMR Psychosocial stress questionnaire).

In the present study psychosocial stressors (total scores) as well as stressors in terms of strained interpersonal relationship, excessive responsibilities, and health related problems, have been found to be significantly and negatively related to life satisfaction for both army personnel of officer ranks as well as of other ranks.

Stress experienced from work family conflict reduces one's value attainment, which in turn lower life satisfaction (Perrewé, Hochwarter, and Kiewitz, 1999). Hence strained interpersonal relationship appears to be negatively related to life satisfaction of army personnel of all the ranks.

Gimble and Booth (1994) reported that excessive responsibilities regarding personnel life highly related with logistic issues, such as having to make arrangements for the care of children, elderly parents, or other family members, and arranging legal and financial matters are stressful for them. Thus excessive responsibilities regarding job and family are negatively correlated with life satisfaction of army personnel of all the ranks in the present study.

Chronic illness (Hechman, 2003) is a psychosocial stressor that has been found to be negatively related to life satisfaction. Since health could be an issue of stress regardless of their ranks, health was found to have a negative relation with life satisfaction for army personnel of both officer ranks and other ranks.

Every one faces challenges in life. These could be due to professional, societal, and domestic environment. These challenges vary in intensity and may be handled inappropriately by human beings both at physical as well as psychological levels, resulting in perceiving them as threats, which in turn generate pressure.

Relation Between Psychosocial Stressors and Life Satisfaction...

When pressure become severe, human organisms experience strain. This in turn effects their life satisfaction. (Pestonjee, 1992).

In the present study stress due to money i.e. financial constraint, marriage as well as perceived threat was found to be related to low life satisfaction for army personnel of officer ranks only. However since the research evidence on army personnel is not available for these variables, present study stands on its merit. Perhaps army personnel of officer ranks are adults who have grown up in children. Stress because of settling their children in life, financially as well as in marriage, could be responsible for their low life satisfaction. Further, in the life of army personnel there are many kinds of threats but exposure to combat or violence, natural disaster, major accidents involving injuries or fatalities are the major perceived threats. Perhaps because of their senior position, they have excessive responsibilities at work place and also at home which may be perceived as threat and could be stressful for them. Gardiner (2006) and Tremblay, Blanchard, Pelletier and Vallerand (2006) have also found that perceived threat was negatively associated with life satisfaction.

Further it has been found that adverse situation lead to low satisfaction for only army personnel of other ranks. Crifford, Ursano, Stuart and Engel (2006) observed that stress faced by army personnel of other ranks are different to some extent from the stress faced by army personnel of officer ranks. It has been proposed that army personnel of other ranks face uncertainty of tour length, no projected date of return, lack of communication (slow mail and poor telephone availability) always being in the chain of command, lack of recreational or entertainment opportunities, lack of companionship of opposite sex, lack of contact with family, lack of private time, lack of sleep and threat of attack with chemical or biological weapons etc. which creates stress, which in turn affects their life satisfaction in negative manner.

Since army personnel of officer ranks are highly experienced people with long years of training in adverse situation such situation no longer create stress for them. Hence the present finding with regard to adverse situation is well supported for both army personnel of other ranks and officer ranks.

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LOCUS OF CONTROL AND PSYCHOLOGICAL HEALTH OF HIV INFECTED PATIENTS

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ABSTRACT

Challenges for health care workers mainly counselors and doctors, resulting from advances in Antiretroviral Therapy in PLHA (Person Living with HIV/AIDS), are issues of adherence and decisions to use lifelong medication. The present study aims to assess Locus of control (LOC) and their role in the psychological health of HIV-infected patients on second line antiretroviral treatment. The sample comprised thirty HIV-infected patients, who are on second line ART (Antiretroviral Therapy) were assessed on Locus of Control Scale by Menon, et al. (1988) and General Health Questionnaire (GHQ-28) by Goldberg and Hollies (1979). For statistical analysis, Mean, SD, 't' test and Correlation were worked out. Results of t-test showed that there was only significant difference between patients having education equal to or above 10th standard and below 10th standard on locus of control score and CD4 counts, gender, education, earning status and numbers of children of PLHA made significant impact on their general health. There was no significant correlation between locus of control and psychological health dimensions except depression score. Based on these findings, it is recommended that treatment emphasis of PLHA on second line therapy should not be only

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on medicine, significant others should be incorporated with care while psychological health programmes (counseling, psychotherapy etc) should form part of the overall therapy.

Keywords: HIV/AIDS, Locus of Control and Psychological health

HIV/AIDS was first recognized in the United States of America in 1981. Since 1981, HIV/AIDS has reached almost every part of the world. HIV (Human Immunodeficiency Virus) infection was first detected in India in 1986 among prostitutes. With an alarming increase of HIV/AIDS in developing countries (estimated prevalence in India = 0.91%), inability to afford ARV therapy and stigma discrimination, key issues like psychological health problems have come fore. AIDS stands for acquired immune deficiency syndrome. Acquired means neither innate nor inherit but transmitted from one infected person to another. Immune is the body's system of defense. Deficiency means not functioning to the appropriate degree. Syndrome means a group of signs and symptoms. AIDS is the advance stage of HIV infection it is a disabling and incurable infection caused by HIV. As HIV progress lively destroys the immune system, most people particularly in resource constrained setting, die within a few years after the appearance of the first signs of AIDS, only a blood test can establish a persons HIV status.

The National ART programme launched on 1st April, 2004 in six high prevalence states has since been scaled up to 211 ART centers across the country 217781 PLHA are continuing on ART as on March 2009 (NACO Annual report 2008-09). It has been seen from available data that nearly 2-3% patients on ART have developed treatment failure to the first line drug regimen as reported by WHO and NACO in December 2006 (NACO, 2008). As the second line drugs have more side effects and tolerability of these drugs is much less compared to the first line drugs necessitating strong systems to ensure patient adherence for a long term response. Center for Disease Control (1998) have been reported 688200 cases of AIDS, but since 1996 there as been a decrease in the occurrence of Opportunistic Infections. This decline can be related to earlier diagnosis, antiretroviral therapy, continuous counselling and lifestyle changes of PLHA. PLHA in rural areas face complex health, socioeconomic and environmental problems that put them at high risk for disease and disability.

These individual over time experienced multiple transitions across health settings that include availability of services in rural areas, and barriers such as distance, geography and poor distribution. These things limit access to health care. Individuals with chronic illnesses who live in rural areas experience more medical conditions, more functional limitations, poorer perceived health status, higher rates of poverty, lower educational levels, and more limited transportation and housing resources (Allie and Anema, 1999).

Locus of control refers to the extent to which individuals believe that they can control events that affect them. Locus of control is the concept of Rotter's

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(1954) social learning theory of personality. Perceived control is defined as a generalized expectancy for internal as opposed to external control of reinforcements (Lefcourt, 1976). Locus of control refers to an individual's beliefs about whether the outcomes of their actions depend on what they do or on events outside of their personal control (Esterhuysen and Stanz, 2004). Individuals with an internal locus of control are likely to believe that outcomes are a consequence of an individual's own striving, ability, and initiative, whereas those with external locus of control tend to believe that outcomes are independent of their own behaviour and attribute outcomes to chance, social structures, fate, or powerful others (Rotter, 1990).

David (1989) has reported the following characteristics of internals and externals:

- Internals are more likely to work for achievements, to tolerate delays in rewards and to plan for long-term goals.
- Internals experiencing success in a task, they are likely to raise their behavioural goals. But externals are more likely to lower their goals.
- After failing a task, internals re-evaluate future performance and lower their expectations of success. But externals raise their expectations.
- Internals are better able to resist coercion.
- Internals are more likely to learn about their surroundings and learn from their past experiences.
- Internals experience more anxiety and guilt with their failures and use more repression to forget about their disappointments.
- Internals find solving their own bouts of depression easier.
- Internals are better at tolerating ambiguous situations.
- Internals are less willing to take risks.
- Internals are more willing to work on self-improvement and better themselves through remedial work.
- Internals derive greater benefits from social supports.
- Internals make better mental health recovery in the long-term adjustment to physical disability.
- Internals are more likely to prefer games based on skills, while externals prefer games based on chance or luck.

Locus of control is the perceived source of control over our behaviour. People with internal locus of control believe they control their own destiny. They tend to be convinced that their own skill, ability and efforts determine the bulk of their life experience. In contrast, people with external locus of control believe that their lives are determined mainly by sources outside themselves-fate, chance, luck or powerful others. For an example, students with strong internal locus of control believe that their grades are determined by their abilities and efforts. These students believe, "The more I study, the better grades I get."

They change their study strategies as they discover their deficiencies. They raise their expectations if they succeed, and they worry when they think have no control over their assignments. In contrast, students with strong external locus of control believe that their grades are the result of good or bad luck, the teacher's mood or God's will. They are more likely to say, "No matter how much I study, the teacher determines my grade. I just hope I'm lucky on the test." These externals are less likely to learn from past experience, and they have difficulty in persisting in task. Locus of control has been shown to be a construct that can predict and explain psychological health.

Psychological Health

Through the importance of health and well-being is accepted by every one, the identification of indicators that would give an accurate picture of the state of an individual's well-being and assessing reliably how a person enjoying such a state has proved to be very challenging. It is generally held that if a person is healthy and happy, he is free from ailments and has the means to meet his physical needs and other demands. But equating well-being with lack of illness and economic condition alone is taking a very partial and narrow view of the human situation. It ignores mental, psychological and social aspects of his or her existence. Through physical and material aspects are certainly important, we cannot meaningfully talk of well-being without taking into account the totality of an individual's existential condition (Sinha, 1990).

WHO (2002) define health as a state of complete physical, mental and social well-being and not merely the absence of any disease and infirmity. In this definition health is conceptualized as: (a) something which goes beyond the mere absence of disease and (b) that health has social and psychological characteristics. However, this definition has been criticized as too vague if not idealistic, leading some researches to differentiate between 'perfect or optimal health' and normal health (Coelho, Yuan, and Ahmed, 1980). Interestingly the WHO definition is very close to the definition of health in various treatises of Indian medical science.

Locus of Control and Psychological Health

Lacock (1993) examined three areas: locus of control, perception about professional health care and general knowledge about HIV disease and reported that clients who demonstrated more internal control had more positive perception of their health care. Varni and Wallander (1988) in a study of haemophilia and spina bifida patients report that psychological factors will predict mental health of people though it may be difficult to determine their interactions. Biaggio (1985) studied the relationship between locus of control and anxiety among Brazilian female college students. Results of study confirmed that externals were more anxious than the internals. McLean and Pietroni (1990) found that an

internal health locus of control was related to the successful adoption of self-care practices. Oberle (1991) noted that the concept has not been shown to be a reliable predictor of health behaviour in either young or elderly person. Metts et al. (1996) summarized that health, social locus of control and increasing levels of emotional support from friends, family and weak ties all make independent contributions to lower depression. Stephen et al. (2000) also reported that the attribution of health status to chance or fate significantly predicted depressive symptoms. Whereas Peter (2005) revealed that health locus of control does not predict mental health independently but self-esteem, health locus of control; age and social-support significantly co-predict mental health.

Ragsdale et al. (1995) explored the multidimensional construct of health locus of control among 14 indigent HIV positive women and found that women believed they had control over their health, yet felt powerful others and chance determine their health outcomes. Preau et al. (2005) examined the relations between health locus of control (HLOC) beliefs and health related quality of life (HRQL) in 302 HIV-infected patients and reported that internal HLOC beliefs at the initiation of treatment were associated with both physical HRQL in multivariate analysis, while chance HLOC beliefs on beginning HAART were associated with mental HRQL at 44 months. Rabkin et al., (1990) showed that higher internal HLOC was negatively associated with hopelessness, and external HLOC was positively related to hopelessness, in other words, participants who believed they controlled their own health had higher levels of hope. Omeje and Nebo (2011) found that internally oriented patients adhered more to their treatment regimen than externally oriented patients. Gawandure and Mayekiso (2011) reported significant correlations between the locus of control- based variables and HIV/AIDS risk. Luo Lu and Ying - Hui Hsieh (1997) reported that control had a direct effect on physical but not mental health.

METHOD

Objective

Review of the available literature revealed that very few number of studies examined locus of control beliefs in HIV-positive individuals on second line treatment of ARVs, and there are very few published studies examining the LOC in relation to psychological health problems. Objective of present study is to assess the locus of control of HIV infected patients who are on second line treatment with antiretroviral drugs and its impact on their psychological health.

Hypotheses

The following hypotheses were formulated for empirical verification:

- H1: There would be significant effect of various demographical variables on Locus of control and psychological health score of HIV- infected patients on second treatment with antiretroviral drugs.

- H2:** Locus of control score would be correlated with psychological health problems score of second line HIV patients on second treatment with antiretroviral drugs.
- H3:** There would be significant impact of internal and external locus of control on general health scores.

Sample

The present study was conducted after the approval of ethical committee of Institute of Medical Science, Banaras Hindu University, Varanasi, India. Sample of this study included thirty patients who are taking second line ARV drugs from OPD of ART Centre/Centre of Excellence, Institute of Medical Science, Banaras Hindu University, Varanasi, India. The inclusion criteria were age >18 years, married, ability of writing and reading, no severe health, psychiatric or cognitive problems such as mental retardation and deafness. Informed consent was obtained from all participants prior to the test administration.

Measures

Following measures were employed in the investigation:

- (1) *Locus of Control Scale*: Locus of Control Scale constructed and standardized by Menon et al. (1988) was used to assess locus of control. It is short, simple scale with scores ranging from 0 to 2 for each item and maximum score of 14. It consists of 7 items, each item contains a suitable example from commonly shared experience. Its Reliability was found to be 0.77 and the Coefficient of Validity was 0.79. The scale is scored in direction of internal attitude i.e. greater the score, higher the belief in internal control. The other end (lower) of the dimension suggests external orientation.
- (2) *Hindi Adaptation of General Health Questionnaire (GHQ-28)*: Hindi adaptation of GHQ-28 (Goldberg and Hollies, 1979) was used to assess the general health. It consists of 28 items which were divided into four sub scales such as anxiety, depression, somatic symptoms and social dysfunction. This is a four point rating scale. Each item is scored from 1 to 4. The lower scores on each sub scale indicate the lower level of anxiety, depression, somatic symptoms and social dysfunction. Item-total correlation of each sub-scale was ranged from 0.40 to 0.85 and the alpha coefficient was ranged from 0.75 to 0.84.
- (3) *Personal data sheet*: The personal data sheet was employed to obtain the demographic information of the participants which included the questions related to information on age, gender, locale (urban/rural), family structure, education, marital status, spouse sero-status, number of children, occupational status, and distance from home to ART Centre etc. CD4 counts and viral load were taken from their treatment cards.

Procedure

Personal data sheet was used for obtained demographical information regarding gender, age, education, locale, marital status, spouse HIV sero-status, number of children & their sero-status, distance of home from ART centre. CD4 (Cluster of Differentiation antigen 4) cell count, WHO clinical stage, opportunistic infection and viral load were recorded from patient treatment record file maintained by ART Centre staff. Hindi Adaptation of General Health Questionnaire (GHQ-28) and Locus of Control Scale have been administered as per instructions provided in the manual. Before starting test instructions were well explained to the respondents individually according the manual after establishing proper rapport with them at OPD of ART center, IMS, BHU, Varanasi.

RESULTS AND DISCUSSION**Table 1. Background information of study participants (n=30)**

<i>Variables</i>	<i>N</i>	<i>Percentage</i>
CD4 ≥ 150	4	13.33 %
<150	26	86.67 %
Gender Male	25	83.33 %
Female	5	16.67 %
Age ≥ 35 yrs	17	56.67 %
<35 yrs	13	43.33 %
Education ≥ 10	15	50.00 %
<10	15	50.00 %
Earning Yes	20	66.67 %
No	10	33.33 %
Marital status Married	24	80.00 %
Widow(ed)	5	16.67 %
Spouse status +ve	10	33.33 %
-ve	13	43.33 %
Number of children ≥ 3	16	53.33 %
<3	13	43.33 %
Viral load ≥ 100000	19	63.33 %
<100000	11	36.67 %

Contd. table 1...

Contd. table 1...

Residence rural	23	76.67 %
Urban	7	23.33 %
OI yes	8	26.67 %
No	22	73.33 %
Transmission sexual root	25	83.33 %
Unknown	5	16.67 %
Distance from ARTC ≥ 200 km	21	70.00%
< 200 km	9	30.00%
Family structure nuclear	21	70.00 %
joint	9	30.00 %

Observation of table-1 indicates that number of male patients is much higher (83% of total sample) than female patients (17% of total sample). The mean age was 39.5 yrs old (range 28-51). 50% patients have 10+ education. Most of the patients included in the study were resident of rural area (76.67% of total sample). 70% of patients were belonging to nuclear family and 80% patients of this study were married and 16.67% were widow/er. Majority of patients have less than three children (53.33% of total sample). 43% patients' spouses were HIV sero negative. Patients 20 (66.67%) were actively engaged in earning their livelihood. 73.33% patients had no opportunistic infection. Most of patients' residences were within the range of 200 KM from ART Centre. The route of transmission was heterosexuality in 25(83.33%) out of 30. Most of PLHA had < 150 /ul CD4 counts (86.67%) and ≥ 100000 c/ml viral load (63.33%).

The obtained data on these measures was analyzed statistically in terms of Mean, SD, t-test and Correlation. Results have been presented in the tables 2, 3, and 4.

Table 2. Effect of demographical variables on Locus of control score of HIV patients on second line treatment

Variables	N	Mean	SD	T
CD4 ≥ 150	4	10.25 I	3.30	.26
< 150	26	9.75 I	3.75	
Gender Male	25	10.20 I	3.46	1.36
Female	5	7.80 E	4.32	
Age ≥ 35 yrs	17	9.59 I	4.12	.36
< 35 yrs	13	10.08 I	3.07	

Contd. table 2...

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Contd. table 2...

	15	11.87 I	2.20	3.72**
Education >=10	15	7.73 E	3.69	
<10	20	11.40 I	2.63	1.76
Earning Yes	10	9.00 I	3.88	
No	24	9.96 I	3.59	.63
Marital status Married	5	8.80 I	4.56	
Widow(ed)	10	11.00 I	3.33	1.03
Spouse status +ve	13	9.46 I	3.73	
-ve	16	9.50 I	4.07	.41
Number of children >=3	13	10.09 I	3.35	
<3	19	10.58 I	3.61	1.57
Viral load >=100000	11	8.45 I	3.48	
<100000	23	9.78 I	3.97	.05
Residence rural	7	9.86 I	2.61	
Urban	8	10.50 I	3.74	.63
OI yes	22	9.55 I	3.67	
No	25	9.60 I	3.54	.66
Transmission sexual root	5	10.80 I	4.49	
Unknown	21	9.43 I	3.71	.85
Distance from ARTC >=200km	9	10.67 I	3.57	
<200km	21	9.14 I	3.76	1.54
Family structure nuclear	9	11.33 I	3.04	
joint				

* $p < .05$,

I = Internal locus of control, E = external locus control

The results in table -2 indicated that there is no significant impact of CD4 counts, gender, age, earning status, marital status, spouse HIV status, number of children, viral load, residential background, opportunistic infection, mode of transmission, distance of home from ART centre and family structure on locus of control scale score of HIV patients on second line treatment. Results also revealed that significant difference was found only between patients having education higher than class 10th obtained higher score (indicate internal locus of control) on locus of control scale as compared to patients having education less than class 10th. Results imply that patients having education less than 10th standard shown external orientation whereas highly educated patients believe in internal control. Results confirm the findings of Morowatishrifabad et al. (2010) they suggested that internal locus of control is related to education level, It is reported that health locus of control, higher internal beliefs were significantly related to higher knowledge and behaviours scores (Gaber and Latif 2012).

It is clear from comparison of mean score of locus of control of older and younger patients that score of older patients show externality than younger patients. Wallhagen et al. (1994) reported that internal health locus of control decreases with age in women but increases with age in men. Morowatishrifabad et al. (2010) also reported that the attributions of external locus of control increased by age. Age positively correlated with lower internal health locus of control and higher powerful others health locus of control. Researches also revealed that low socioeconomic status, gender, old age and low education are associated with increased External Health Locus of Control (Spalding, 1995; Cohen and Azaiza, 2007). Patients having source of income have more internal locus of control as compared to the patients having no source of income. Cicirelli (1980) and Hunter et al. (1980) found that in men, level of income were associated with lower levels of internal health locus of control while in women the relationship was reversed. The literature generally associates internality with higher socioeconomic status, including higher education and income.

No significant difference was obtained in male and female patients regarding locus of control. This finding supported by Schultz and Schultz (2005) who have not been found significant gender difference in locus of control in a U.S. population whereas Ogunyemi and Udonadi (2010), reported that male HIV patients having higher health locus of control than their female counterpart. Cicirelli (1980) and Miller (1987) reported that men may have different control needs and a more internal orientation than women. Morowatishrifabad et al. (2010) also reported that men revealed more internal locus of control and women revealed more chance locus of control.

Results of this study reveal that patients have viral load ≥ 100000 c/ml have more internal orientation as compared to the HIV patients who have viral load < 100000 c/ml. It means that patients having less number of viral load, think that their health is dependent on their self health behaviour, "if I take medicine according to doctor, and have precaution suggested by counselor then there would be improvement in my general health." Results confirm the findings of Anita et al. (2004) who reported that persons with low levels of HIV viral loads perceive themselves as having a more internal locus of control, and believe that doctors have a great deal of influence on their health status. Rest of demographical variables have no significant difference on locus of control scale score. The results presented in table-2 also indicate that there is no significant difference between patients from rural areas and urban areas. Zimmerman (2010) concluded that the rural group did not score significantly different than the urban group on health locus of control.

Table 3. Effect of demographical variables on general health score of HIV patients on second line treatment

General health	Social Dysfunction	Somatic symptoms	Depression
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Table 3. Effect of demographic variables on general health score of HIV patients on second line treatment

Variables	Anxiety			Depression			Somatic symptoms			Social Dysfunction			General health		
	Mean	SD	T	Mean	SD	t	Mean	SD	T	Mean	SD	t	Mean	SD	t
CD4 >=150 (4)	15.11	4.24	2.27*	14.50	6.14	1.09	16.75	2.50	1.62	14.75	1.71	3.10**	63.50	17.25	1.88
	<150 (26)	20.00	4.08	17.15	4.30		20.62	4.62		20.65	3.68		71.62	13.57	
Gender Male (25)	18.72	4.48	1.78	15.96	4.34	2.45*	19.28	4.35	2.37*	14.68	4.07	.46	72.80	12.18	2.67*
Female (5)	22.40	2.19		21.00	3.16		24.20	3.49		20.60	4.04		90.20	5.26	
Age >=35yrs (17)	19.94	4.29	.87	17.59	4.73	1.09	21.06	4.29	1.33	20.78	3.51	1.49	79.35	14.14	1.59
<35yrs (13)	18.54	4.54		15.77	4.25		18.85	4.78		18.62	4.43		71.00	14.37	
Education >=10 (15)	11.87	2.20	3.72**	15.73	4.23	1.30	19.53	5.41	.67	19.27	3.76	.77	73.27	15.22	.92
<10 (15)	7.73	3.70		17.83	4.73		20.67	3.64		20.40	4.12		78.28	14.06	
Working Yes (20)	20.20	4.77	1.57	17.65	4.21	1.48	20.95	4.70	1.47	20.95	3.69	2.31*	79.25	13.86	1.95
No (10)	17.60	4.02		15.10	4.93		18.40	3.86		17.60	3.84		68.70	14.13	
Marital status	18.96	4.45	1.02	16.46	4.22	1.23	19.42	4.56	1.44	19.58	4.15	.031	74.83	14.66	.59
married (24)															
Widow(ed) (5)	21.20	4.49		19.20	5.98		22.60	4.10		20.20	3.56		79.20	16.93	
Spouse status +ve (10)	20.70	4.22	1.63	17.80	4.26	1.46	19.70	5.29	.44	19.70	4.42	.31	78.90	15.17	1.30
-ve (13)	17.69	4.50		15.23	4.11		19.15	4.08		19.15	4.06		70.92	14.16	
Number of children	21.75	3.55	3.99**	18.44	4.18	2.09*	22.13	3.59	3.26**	20.81	3.04	1.74	82.50	11.51	3.21**
>=3 (16)	16.38	3.66		15.08	4.48		17.31	4.37		18.31	4.70		67.08	14.37	
<3 (13)															

Contd. table 3...

Contd. table 3...

Viral load	19.37	4.51	.05	16.95	4.71	.23	20.47	4.80	.58	19.32	4.08	.92	76.63	15.70	.44
>=100000 (19)	19.27	4.36		16.55	4.46		19.45	4.28		20.73	3.90		74.16	13.09	
<100000 (11)															
Residence rural (23)	19.22	4.44	.26	16.65	4.83	.32	19.96	4.61	.31	19.83	3.77	.02	75.22	15.15	.35
Urban (7)	19.71	4.50		17.25	3.77		20.57	4.76		19.86	5.05		77.43	13.64	
OI Yes (8)	20.25	5.85	.68	16.75	4.71	.64	19.50	4.24	.43	20.00	4.82	.14	76.50	17.61	.17
No (22)	19.00	3.83		16.82	4.59		20.32	4.76		19.77	3.78		75.45	14.07	
Transmission	19.24	4.43	.26	16.88	4.76	.21	20.32	4.31	.58	19.84	4.03	.02	75.88	14.14	.12
sexual root (25)	19.80	4.60		16.40	3.65		19.00	6.16		19.80	4.37		70.00	15.57	
Unknown (95)															
Distance from ARTC	19.76	4.30	.81	17.38	4.66	1.07	20.52	4.29	.77	19.57	3.78	.54	76.76	14.46	.58
>=200km(21)	18.33	4.06		15.44	4.19		19.11	5.30		20.44	4.69		73.33	15.53	
<200km (9)															
Family structure	18.86	4.14	.90	17.00	4.56	.36	20.14	4.18	.08	19.86	4.37	.05	76.38	14.62	.10
nuclear (21)	20.44	4.98		16.33	4.74		20.00	5.66		19.76	3.23		76.56	15.43	
joint (9)															

*p<.05 and **p<.01

The results presented in table-3 indicate that patients have low ($\geq 150/\mu\text{l}$) number of CD4 counts significantly scored higher on anxiety (2.27, $P < .05$) and social dysfunction (3.10, $p < .01$) as compared to patients who have higher ($< 150/\mu\text{l}$) number of CD4 counts. Patients were counselled by trained counselors on their each follow up visit at ART centre that higher number CD4 counts indicate strong immune system. It may be a reason of higher score on anxiety obtained by patients having low CD4 counts as compared to patient having higher CD4 counts. Due to low CD4 counts there may be increase in number of opportunistic infections that limited their performance on different areas and aspects of life. So they complain significantly higher level of social dysfunction. Some finding reported by Weinfurt et al. (2000), improvements in health related quality of life related with lower viral load and higher CD4 counts.

Results indicate that female patients significantly scored higher on psychological health problems (2.67, $p < .05$) and the sub scales of psychological health: depression (2.45, $p < .05$) and somatic symptoms (2.37, $p < .05$) as compared to male patients. In Indian society, females have very weak economical and social support as compared to males. After death of husband social stigma increases and economic support decreases. Due to all these conditions female patients complain more health problem as compared to male patients. Results are consistent with findings that women's rate of depression is twice as high as that of men among the general population (Kessler et al., 1993) Rube et al., (1993) and Karp and Frank (1995). Siegel et al. (2004) reported that ARV treatments have significantly improved the physical health of those living with HIV/AIDS, no evidences were found that these treatments significantly improved psychological health of women.

There is significant difference between HIV patients who have education more than 10th standard and equal or below 10th standard regarding anxiety (3.72, $p < .01$). Mean scores indicate that higher level of education is related to better psychological health as compared to lower level of education. It implies that educated patients are more aware about the available health facilities for HIV/AIDS care. Level of knowledge about different options for HIV treatment and care of patients having higher education is better as compared to patients having less education. Available literature reviewed so far revealed that there is lack of studies showing the effect of education on health.

Morrison, et al., (2002) reported that older age demonstrated a marginal association with current major depressive disorder and Ghufraan (2003) reported that age of women did not affect their depression but widowed had more depressive symptoms than those whose spouses are alive. But the findings of the present study did not support the results.

Results of table-3 also reveals that patients having three or less than three children reported significantly less anxiety (23.99, $p < .01$), depression (2.09,

$p < .05$), somatic symptoms (3.26, $p < .01$) and total psychological health problems (3.21, $p < .01$) as compared to patients having more than three children. It implies that patients having more than three children have more economical burden. So they are more worried about their future and they need money and resources for the treatment especially when their children are also suffering from HIV.

Patients from joint and nuclear families did not differ significantly regarding health problems. The findings of this study are consistent with results which revealed no significant difference between people living in joint and nuclear family setting (Carstairs and Kapur 1976). Whereas Chaturvedi (1983) indicated that the people belonging to nuclear families have significantly more psychiatric problems.

Table 4 indicate that patients with internal locus of control significantly differ from patients with external locus control only on depression dimension of GHQ (2.73, $p < .05$). As it is clear that persons with internal locus control are taking responsibility on their own for results and think that they are responsible for the things occurring in life, for behaviours towards treatment and their health conditions, so they follow more strictly the advice of doctors/counsellors as compare to patients with external locus of control. But externally oriented patients think that they are not able to handle the situation, it is beyond their control. Wen et al. (1979) indicated that the externally oriented persons scored higher on symptomatology than did the internally oriented persons. Nielsen and Brodbeck (1997) had studied back-injured persons and not found significant association between greater adherence and internal health locus of control (IHLC), low levels of depression, and low trait anxiety with internal health locus of control. Krause and Stryker (1984) suggest that locus of control orientation buffered psycho-physiological distress, with men who expressed moderate internality experiencing the least distress. Weisman et, al. (1980) reported that internally oriented cancer patients benefited more than did externally oriented patients from a psychosocial counseling intervention.

Results of the study emphasize that locus of control have greater impact on depression than other subscale of general health. The locus of control orientation can be modified by counselling, psychotherapy and life experiences. Study recommended that counselors should encourage their patients to participate in the management of their health care. Limitation of this study is small sample size that restricted to generalization of the findings of the research. During the study, need was felt to study emotional intelligence and other personality traits as intermediate variables between locus of control and psychological health. Present study examined only the role of locus of control in psychological health of patients on second line Anti Retroviral Treatment and ignored the association with cognitive appraisal, coping style and level of stress.

Table 4. Significance difference between internal and external LOC on psychological health score of HIV patients

Variable	Depression	Somatic Symptoms	Social dysfunction	Total score
Internal LOC	2.73	3.26	3.21	9.20
External LOC	2.00	2.00	2.00	6.00
F	4.00	4.00	4.00	4.00
p	.05	.01	.01	.01

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Table 4. Significance difference between internal and external LOC on psychological health score of HIV patients

Variable	Anxiety		t	Depression			T	Somatic Symptoms			Social dysfunction			Total score		
	Mean	SD		Mean	SD	SD		Mean	SD	T	Mean	SD	t	Mean	SD	t
ILOC(20)	19.15	4.68	.32	15.35	4.13	2.73*		19.60	3.12	.84	19.65	4.23	.3	73.75	15.01	1.05
ELOC(10)	19.70	3.91		19.70	4.06			21.10	3.18		20.20	3.71	5	79.70	13.63	

*p<.05

This is important effect of locus of control on psychological health of patients on second line Anti Retroviral Treatment. The patterns of locus of control of patients in the study were similar to previous studies on patients of epilepsy, spinal cord injury, cancer, diabetic etc. The association between locus of control and psychological health need to be studied on large sample for better understanding of relationship between these variables.

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LIFE SKILL AND PERCEIVED HOME ENVIRONMENT AS PREDICTORS OF MENTAL HEALTH AND ADJUSTMENT PROBLEMS AMONG PRIMARY SCHOOL CHILDREN

O.P. Sharma* Rajshree Tewari** and Deshmukh Juhi***

ABSTRACT

The family is traditionally seen as the basic foundation of society. The present research was undertaken to understand, infer and predict the multifarious effect of Home Environment, Life Skills and Parenting Mood on the Mental Health and Adjustment of primary School Children in Single-Parent and Dual-Parent Families. The sample comprised of 240 primary school children from Single-Parent Families and Dual-Parent Families (age-range 7 to 10 years) with balanced number of boys and girls. These children were selected from 10 private schools of Jaipur district in Rajasthan State. The Research Design for the proposed study was a 2 x 2 x 2 Factorial one. Descriptive Group Statistics (Means and Standard Deviations) of all the groups were computed through SPSS-17 software.

Key Words: Percieved Home Environment, Life skills, Mental Health and Adjustment

A 2 x 2 x 2 ANOVA was also computed to see the significance of main and interactive effects of Perceived Home Environment (Relationship – Personal growth), Life Skills (Adequate – Inadequate) and Parenting Mode (Single-Parent Family – Dual-Parent Family) on Mental Health and Adjustment in primary school children of Single-Parent and Dual-Parent Families. It is found that Parenting

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Mode and Perceived Home Environment are strongly related with Mental Health and Adjustment in primary school children of Single-Parent and Dual-Parent Families. Life Skills is not at all related with Mental Health and Adjustment in primary school children of Single-Parent and Dual-Parent Families.

The family is traditionally seen as the basic foundation of society. Generally, family can be seen as a group of people who have biological, emotional or legal ties to each other (Bauserman, 2002). In different cultures the term "family" may mean different things and a wide variation of families, usually people of two generations and two genders are involved (Ciechetti et al. 1995). Family is a group comprising a husband and wife and their dependent children, constituting a fundamental unit in the organization of society. From it stem the attitudes and behaviour, habits that set the pattern for social development and adjustment. The child in the family is the recipient of whatever constructive influences may result from the interrelations of his family with the social order. The concept of family has changed from the large extended to smaller units, nowadays to even smaller single parent family.

A Dual-Parent family consists of a mother, father and their biological or adoptive descendents, often called the traditional. The concept of Single-Parent family is used when a family is formed of one custodial parent and a number of dependent children. In this family there is only one parent in the household raising the children. The family environment is a pervasive and highly influential socialization and highly influential socialization agent for children (Compass, B.E. et al. 1990). Parenting has been documented to predict children's behavioural and emotional problems (Langua, Wolehick, Sandler, and West, 2000).

One of the most fundamental aspects of personality of a child is his ability to adjust in any situation or circumstances. Adjustment is a process by which an individual attempts to cope with, master and transcend the challenges of life by utilizing a variety of techniques and strategies. Adjustment may be defined as the process by means of which the individual seeks to maintain physiological and psychological equilibrium and propels himself for self enhancement. The adequacy of the adjustment the individual makes depends in considerable measure on the security of the problems with which he is faced.

Family is the social capsule in which feelings develop; therefore, it becomes the most potent force in developing the ability of adjustment Jahangir Maghsaudi & Nazanin Hashemi Sabour et.al (2010). The primary responsibility for the child's adjustment lies with the parents who set the basic personality pattern through the security they provide particularly in his/her early years. The revelation of the subtlety, complexity and elusiveness of the psychological forces in the family, which affect the child's feelings and attitudes, are a special contribution to the child's way of adjustment. Healthy family relationship leads to a good personal and social adjustment. There is an enormous amount of literature on

family structures and their effect on the children. Dunn et al. 1998 studied effects of family structure on childhood, adolescence and adult psychological functioning and health inferred that disruption of family life causes acute stress to all family members and it may also have disadvantageous long-term effects on the psychological well being of the offspring. Dunnean, et al. 1999, hypothesized that in a Single-Parent family in childhood may be a risk factor of developing aggressive behaviour, frustration and maladjustment later in life.

The term "life skills" is open to wide interpretation. However, there was a consensus that all participants were using the term to refer to psychosocial skills. It is the ability for adaptive and positive behaviour that enable individual to deal effectively with demands and challenges everyday life (Nina Chien & Vanessa Harbin et.al 2012). It further encompasses thinking skill, social skill and negotiation skill. It also helps the young people to develop and grow into well-behaved adults. Life skills are the abilities that help to promote mental well being and competence in young people as they face the realities of life. It helps the young people to take positive actions to protect themselves and to promote health and meaningful social relationship. Life skill facilitates a complete and integrated development of individuals to function effectively as social beings.

The concept of Mental Health refers to optimal psychological functioning and experience. It is the focus not only of everyday interpersonal inquiries (e.g. "How are you?") but also of intense scientific scrutiny. Although the question, "How are you?" may seem simple enough, theorists have found the issue of Mental Health to be complex and controversial. Mental Health is a complex construct that concerns optimal experience and functioning. Current research on Mental Health has been derived from two general perspectives: the hedonic approach, which focuses on happiness and defines Mental Health in terms of pleasure attainment and pain avoidance; and the eudemonic approach, which focuses on meaning and self-realization and defines Mental Health in terms of the degree to which a person is fully functioning. But now with the advent of multilevel modeling [e.g. hierarchical linear modeling (HLM)] has allowed researchers to go beyond the between-person or individual-difference focus that dominated the field. Instead of merely asking why person A has higher Mental Health than person B, researchers can now also examine the largely independent question of why person A is better off today than he or she was yesterday (Roseman, 1954).

There has been increasing appreciation within psychology of the fundamental importance of warm, trusting, and supportive interpersonal relationship for wellbeing. So important is relatedness that some theorists have defined relatedness as a basic human need that is essential for Mental Health Argyle M. (in press), and other have suggested that having stable, satisfying relationship is a general resilience factor across the lifespan.

METHOD

Objective

The Objective this study is to conduct the extent and direction of relationship between Perceived Home Environment, Life Skills & Parenting Mode and Mental Health & Adjustment in primary school children of Single-Parent and Dual-Parent Families. On the basis of the reviewed literature hypotheses were proposed that positive perceived home environment and life skills would be positively related to mental health and adjustment.

Sample

In order to satisfy the aims and objectives concerned and to test the aforesaid hypotheses, initially a random sample of 1215 primary school children was taken. Later on, a sample of 240 subjects was kept for statistical analysis in order to test the hypotheses on the basis of their high or low values.

The sample comprised of 240 primary school children from Single-Parent Families and Dual-Parent Families (age-range 7 to 10 years) with balanced number of boys and girls. These children were selected from 10 private schools of Jaipur district in Rajasthan State, India.

Tools

The following measures were administered on the primary school children from single-parent families and dual-parent families with informed consent of their parents, guardians and school authorities and they were duly assured that the results so obtained would be kept confidential and would not be used for any other purpose extraneous to the present research.

Home Environment Questionnaire (Jacob O. Sines, 1984).

The Home Environment Questionnaire (HEQ) is an instrument designed to identify psychosocial factors that exert specific types of environmental pressure upon a target child. Two versions of the HEQ exist: the Single Parent Families Version and the Two Parent Families Version. Information below pertains to the Single Parent Families Version.

Life Skills Questionnaire (Clements, 2002)

The questionnaire the general life skills of the subject to deal effectively with the daily challenges of life. It deals with 7 areas viz. experience, feeling-values, relationships, study, work and health. The questionnaire contains 52 items for all life skills areas. The responses in the questionnaire are scored on a four-point scale and the manual carried guidelines for scoring adequate and inadequate life skills in respective areas. The questionnaire is standardized and has the internal consistent reliability and test-retest reliability as .57 and .61 respectively. It has ample construct validity and predictive validity to the extent of .63. The scale has been recommended by WHO 2002.

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Adjustment Inventory (Asthana, 1997)

The adjustment Inventory has been devised to serve as a quick screening device for use with Hindi knowing school and college students. It has been used successfully between ages 14 and above. The inventory in no way pretends to diagnose the type of psychoneurotic disorder, or to indicate the degree of adjustment in various areas of living; it merely attempts to segregate the poorly-adjusted from those who are better adjusted and who may stand in need of psycho-diagnostic study and counseling.

General Mental Health Questionnaire (Shiv Gautam & Preet Kamal, 1987).

Goldberg's 60 item General Health Questionnaire is one of the best screening devices available so far for identifying psychiatric cases in population. The original questionnaire is English and has been translated into Hindi. An emphasis was made to have the language of common use. The original 60 item GHQ (Goldberg, 1976) was translated in Hindi by Dr. Shiv Gautam and independently by two Professors of Hindi in the University of Rajasthan. These translations were pooled together and a final version was prepared.

Procedure: In order to assess the interactive relationship between the variables under study, first the consent of the authorities of various schools was taken. Then the psychological tools were administered on the random sample. After obtaining the required demographic information, the sample was divided as per the operational design. The results were scored and then these scores were statistically analyzed.

RESULTS AND DISCUSSIONS

The outcome of a study may be summarized through the use of measures of central tendency and of variability

Table No 1. Showing the F values for a 2 x 2 x 2 ANOVA for Mental Health

Source of Variance	df	Sum of Squares	Mean Squares	F	Significance Level
Main Effects:					
Perceived Home Environment	1	11481.667	11481.667	12.934	.000 (S*)
Life Skills	1	1717.350	1717.350	1.935	.166 (NS)
Parenting Mode	1	212891.267	212891.267	239.823	.000 (S*)
Interaction Effects:					
First order Interactions:					
Perceived Home Environment x Life Skills	1	212.817	212.817	.240	.625 (NS)

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Life Skills x	1	442.814	442.817	.499	.481 (NS)
Parenting Mode					
Perceived Home	1	9830.400	9830.400	11.074	.001 (S*)
Environment x					
Parenting Mode					
Second order Interactions:					
Perceived Home	1	11481.667	11481.667	12.934	.000 (S*)
Environment x					
Life Skills x					
Parenting Mode					

*Significant at 0.01 level.

So as to see the significance of main effects of Perceived Home Environment (Relationship – Personal Growth), Life Skills (Adequate - Inadequate) and Parenting Mode (Single- Parent Family – Dual-Parent Family) on Mental Health, the 2x2x2 ANOVA with equal cell frequencies was computed to explain the variance. The Table reflects that Perceived Home Environment (Relationship – Personal Growth) has significant main effect ($F= 12.934$) on Mental Health. Thus, the null hypothesis [Ho 1] that Perceived Home Environment (Relationship – Personal Growth) will have no significant main effect on Mental Health in primary school children of Single-Parent and Dual-Parent Families stands rejected and rival/alternative hypothesis is accepted at 0.01 level of confidence. The aforesaid results are as per theoretical expectations and are vindicated by the following empirical researches (Ermisch, and Francesconi, 2000; Burghes, Clarke, and Cronin, 1997). It is observed that Life Skills (Adequate - Inadequate) has no significant main effect ($F= 1.935$) on Mental Health. Thus, the null hypothesis [Ho 3] that Life Skills (Adequate - Inadequate) will have no significant main effect on Mental Health in primary school children of Single-Parent and Dual-Parent Families stands accepted and no rival/alternative hypothesis can be entertained. It is observed that Perceived Home Environment (Relationship – Personal Growth) & Parenting Mode (Single-Parent Family – Dual-Parent Family) has significant interactive effect ($F= 11.074$) on Mental Health.

Thus, the null hypothesis [Ho 11] that Perceived Home Environment (Relationship – Personal Growth) & Parenting Mode (Single-Parent Family – Dual-Parent Family) will have no significant interactive effect on Mental Health in primary school children of Single-Parent and Dual-Parent Families stands rejected and rival/alternative hypothesis is accepted at 0.01 level of confidence. The aforesaid results are as per theoretical expectations and are vindicated by the following empirical researches (Ermisch, and Francesconi, 2000; Burghes, Clarke, and Cronin, 1997; Ferri, 1984; Wadsworth, Burnell, Taylor and Butler, 1985; Mauldon, 1990; Whelan, 1994). It is observed that Perceived Home Environment (Relationship – Personal Growth), Life Skills (Adequate - Inadequate)

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& Parenting Mode (Single-Parent Family – Dual-Parent Family) has significant interactive effect ($F= 12.934$) on Mental Health. Thus, the null hypothesis [H_0 13] that Perceived Home Environment (Relationship – Personal Growth), Life Skills (Adequate - Inadequate) & Parenting Mode (Single-Parent Family – Dual-Parent Family) will have no significant interactive effect on Mental Health in primary school children of Single-Parent and Dual-Parent Families stands rejected and rival/alternative hypothesis is accepted at 0.01 level of confidence. .

Table No 2. Showing the F values for a 2 x 2 x 2 ANOVA for Adjustment

Source of Variance	df	Sum of Squares	Mean Squares	F	Significance Level
Main Effects:					
Perceived Home Environment	1	5.400	5.400	505.185	.476 (NS)
Life Skills	1	13.067	13.067	1.232	.268 (NS)
Parenting Mode	1	5358.150	5358.150	505.185	.000 (S)(0.01 level)
Interaction Effects:					
First order Interactions:					
Perceived Home Environment x Life Skills	1	15.000	15.000	1.414	.236 (NS)
Life Skills x Parenting Mode	1	.150	.150	.014	.905 (NS)
Perceived Home Environment x Parenting Mode	1	35.267	35.267	3.325.040	(S)(0.05 level)
Second order Interactions:					
Perceived Home Environment x Life Skills x Parenting Mode	1	.150	.150	.014	.905 (NS)

So as to see the significance of main effects of Perceived Home Environment (Relationship – Personal Growth), Life Skills (Adequate - Inadequate) and Parenting Mode (Single- Parent Family – Dual-Parent Family) on Adjustment, the 2x2x2 ANOVA with equal cell frequencies was computed to explain the variance. The Table reflects that Perceived Home Environment (Relationship – Personal Growth) has no significant main effect ($F= 505.185$) on Adjustment. Thus, the null hypothesis [H_0 2] that Perceived Home Environment (Relationship– Personal Growth) will have no significant main effect on Adjustment in primary school children of Single-Parent and Dual-Parent Families stands accepted and no rival/

alternative hypothesis can be entertained. It is observed that Life Skills (Adequate - Inadequate) has no significant main effect ($F= 1.232$) on Adjustment. Thus the null hypothesis [Ho 4] that Life Skills (Adequate - Inadequate) will have no significant main effect on Adjustment in primary school children of Single-Parent and Dual-Parent Families stands accepted and no rival/alternative hypothesis can be entertained. It is observed that Parenting Mode (Single-Parent Family - Dual-Parent Family) has significant main effect ($F= 505.185$) on Adjustment. Thus, the null hypothesis [Ho 6] that Parenting Mode (Single-Parent Family - Dual-Parent Family) will have no significant main effect on Adjustment in primary school children of Single-Parent and Dual-Parent Families stands rejected and rival/alternative hypothesis is accepted at 0.01 level of confidence. The aforesaid results are as per theoretical expectations and are vindicated by the following empirical researches (Simons, Lin, Gordon, Conger, and Lorenz, 1999; Hetherington, 2002).

So as to see the significance of interactive effects of Perceived Home Environment (Relationship - Personal Growth) & Life Skills (Adequate - Inadequate), Life Skills (Adequate - Inadequate) & Parenting Mode (Single-Parent Family - Dual-Parent Family), Perceived Home Environment (Relationship - Personal Growth) & Parenting Mode (Single-Parent Family - Dual-Parent Family) and Perceived Home Environment (Relationship - Personal Growth), Life Skills (Adequate - Inadequate) & Parenting Mode (Single-Parent Family - Dual-Parent Family) on Adjustment, the $2 \times 2 \times 2$ ANOVA with equal cell frequencies was computed to explain the variance. The Table reflects that Perceived Home Environment (Relationship - Personal Growth) & Life Skills (Adequate - Inadequate) has no significant interactive effect ($F= 1.414$) on Adjustment. Thus, the null hypothesis [Ho 8] that Perceived Home Environment (Relationship - Personal Growth) & Life Skills (Adequate - Inadequate) will have no significant interactive effect on Adjustment in primary school children of Single-Parent and Dual-Parent Families stands accepted and no rival/alternative hypothesis can be entertained. It is observed that Life Skills (Adequate - Inadequate) & Parenting Mode (Single-Parent Family - Dual-Parent Family) has no significant interactive effect ($F= .014$) on Adjustment. Thus the null hypothesis [Ho 10] that Life Skills (Adequate - Inadequate) & Parenting Mode (Single-Parent Family - Dual-Parent Family) will have no significant interactive effect on Adjustment in primary school children of Single-Parent and Dual-Parent Families stands accepted and no rival/alternative hypothesis can be entertained. It is observed that Perceived Home Environment (Relationship - Personal Growth) & Parenting Mode (Single-Parent Family - Dual-Parent Family) has significant interactive effect ($F= 3.325$) on Adjustment. Thus, the null hypothesis [Ho 12] that Perceived Home Environment (Relationship - Personal Growth) & Parenting Mode (Single-Parent Family - Dual-Parent Family) will have no significant interactive effect on

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Adjustment in primary school children of Single-Parent and Dual-Parent Families stands rejected and rival/alternative hypothesis is accepted at 0.05 level of confidence. The aforesaid results are as per theoretical expectations and are vindicated by the following empirical researches (Gauthier, 1999; Dunn, Davies, O'Connor, & Sturgess, 2001; Simons, Lin, Gordon, Conger, and Lorenz, 1999; Hetherington, 2002). It is observed that Perceived Home Environment (Relationship - Personal Growth), Life Skills (Adequate - Inadequate) & Parenting Mode (Single-Parent Family - Dual-Parent Family) has no significant interactive effect ($F = .014$) on Adjustment. Thus, the null hypothesis [Ho 14] that Perceived Home Environment (Relationship - Personal Growth), Life Skills (Adequate - Inadequate) & Parenting Mode (Single-Parent Family - Dual-Parent Family) will have no significant interactive effect on Adjustment in primary school children of Single-Parent and Dual-Parent Families stands accepted and no rival/alternative hypothesis can be entertained.

Table No 3. Showing the Correlation Coefficients among Variables

	<i>Mental Health</i>	<i>Adjustment</i>
Perceived Home Environment	.56	.15
Life Skills	.11	.02
Parenting Mode	.69	.64

So as to see the significance of extent and direction of relationship between Perceived Home Environment, Life Skills & Parenting Mode and Mental Health & Adjustment in primary school children of Single-Parent and Dual-Parent Families, the Pearson Product - Moment Correlation Coefficients were computed to explain the relationship. The Table depicts that the extent of relationship between Perceived Home Environment and Mental Health is ($r_{tt} = .56$) in the positive direction. Thus, the null hypothesis [Ho 15] that Perceived Home Environment will have no significant extent and direction of relationship with Mental Health in primary school children of Single-Parent and Dual-Parent Families stands rejected and rival/alternative hypothesis is accepted at 0.01 level of confidence. The aforesaid results are as per theoretical expectations and are vindicated by the following empirical researches (Ermisch, and Francesconi, 2000; Burghes, Clarke, and Cronin, 1997). It is observed that the extent of relationship between Perceived Home Environment and Adjustment is ($r_{tt} = .15$) in the positive direction. Thus, the null hypothesis [Ho 16] that Perceived Home Environment will have no significant extent and direction of relationship with Adjustment in primary school children of Single-Parent and Dual-Parent Families stands rejected and rival/alternative hypothesis is accepted at 0.05 level of confidence. The aforesaid results are as per theoretical expectations and are vindicated by the following empirical researches (Gauthier, 1999; Dunn, Davies, O'Connor, & Sturgess, 2001). It is observed that the extent of relationship

between Life Skills and Mental Health is ($r_{tt} = .11$) in the positive direction. Thus, the null hypothesis [Ho 17] that Life Skills will have no significant extent and direction of relationship with Mental Health in primary school children of Single-Parent and Dual-Parent Families stands accepted and no rival/alternative hypothesis can be entertained. It is observed that the extent of relationship between Life Skills and Adjustment is ($r_{tt} = .02$) in the positive direction. Thus, the null hypothesis [Ho 18] that Life Skills will have no significant extent and direction of relationship with Adjustment in primary school children of Single-Parent and Dual-Parent Families stands accepted and no rival/alternative hypothesis can be entertained. It is observed that the extent of relationship between Parenting Mode and Mental Health is ($r_{tt} = .69$) in the positive direction.

Thus, the null hypothesis [Ho 19] that Parenting Mode will have no significant extent and direction of relationship with Mental Health in primary school children of Single-Parent and Dual-Parent Families stands rejected and rival/alternative hypothesis is accepted at 0.01 level of confidence. The aforesaid results are as per theoretical expectations and are vindicated by the following empirical researches (Ferri, 1984; Wadsworth, Burnell, Taylor and Butler, 1985; Mauldon, 1990; Whelan, 1994). It is observed that the extent of relationship between Parenting Mode and Adjustment is ($r_{tt} = .64$) in the positive direction. Thus, the null hypothesis [Ho 20] that Parenting Mode will have no significant extent and direction of relationship with Adjustment in primary school children of Single-Parent and Dual-Parent Families stands rejected and rival/alternative hypothesis is accepted at 0.01 level of confidence. The aforesaid results are as per theoretical expectations and are vindicated by the following empirical researches (Simons, Lin, Gordon, Conger, and Lorenz, 1999; Hetherington, 2002).

The main findings of the study thus establish the relationship between Home environment, life skills, parenting mode, mental health and adjustment. Home environment and parenting mode are found to be positively correlated with mental health and adjustment than life skills. It seems that for a young child, parent's presence and loving acceptance are crucial influential factors. The way he perceives his home environment and his comfort level there, gives him a cushion as well as a push for his psychological enrichment. The life skills was not a significant factor in these results, may be because they are still in the developing stage. The findings could not only be used for theoretical purposes but also for enriching the tender psychological world of children by sharing this results with budding parents.

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COPING STRATEGIES IN PARKINSON'S DISEASE PATIENTS

Neelam*

ABSTRACT

Individuals with Parkinson's disease (PD) are faced with the challenge of coping with a chronic, progressive disease that will alter their lives in numerous ways. The present study was mainly aimed at understanding the coping strategies used by patients with Parkinson's disease. For this, 100 patients of Parkinson's disease aged 45 to 70 years were selected from the patients who were attending the OPD of neurology departments at PGIMS, Rohtak, PGIMER, Chandigarh, and Ram Manohar Lohiya Hospital, Delhi. Data were collected by administering Folkman and Lazarus' Ways of Coping Questionnaire. Data were analyzed by descriptive statistics (Mean, SD, S7", and KA") to ascertain the normalcy of data, t-ratios to compare the two groups in terms of their mean scores of eight measures of coping, and Discriminant Function Analysis to examine the joint contribution of all the eight variables in differentiation of two groups. Results revealed that patients with Parkinson's disease scored significantly low on Confrontive Coping, Self Controlling, Seeking Social Support, Accepting Responsibility, Planful Problem Solving, and Positive Reappraisal. In Discriminant Analysis, Positive Reappraisal, Self Controlling, and Distancing emerged as potent discriminators classifying the two groups correctly by 83.5%. Overall findings revealed the patients with Parkinson's disease to be significantly low on both the problem-focused and emotion-focused ways of coping. Implications have also been discussed.

Key Words: Coping Strategies, Parkinson's disease

Parkinson's disease (PD) is a chronic, progressive and neurodegenerative illness that produces rigidity, slowness of movement (bradykinesia), postural

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instability, and often, tremor at rest (Nutt and Wooten, 2005). The indications for Parkinson's syndrome are disorders of the sympathetic and parasympathetic functions of muscles. Parkinson's disease is a disorder of the central nervous system, involving primarily the degeneration of certain nerve cells in deep part of the brain called the basal ganglia, and in particular a loss of nerve cells in a part of brain stem called the substantia nigra. These cells produce the neurochemical transmitter, dopamine, which is partly involved in initiating a circuit of messages that coordinate the normal movements. In the absence or reduced level of dopamine, the neurons in the receiving area (called dopamine receptors) in the next part of basal ganglia circuit called striatum are not adequately stimulated and resultantly leads to impairment of movement with tremor, stiffness or balance problems along with some other symptoms. The damaged and dying neurons in the substantia nigra show a round cellular marker called, Lewy body, which is taken as specific pathological hall mark of Parkinson's disease. Because of this, the disorder is sometimes called Lewy Body Parkinson's Disease, Lewy Body Parkinsonism, or simply Lewy Body disease, (Roger et al, 2004). Why do these neurons degenerate? The exact reason is not yet known. Parkinson's disease is just one type of Parkinsonian syndrome or Parkinsonism. Parkinsonism is an umbrella term consisting of PD and related syndromes. PD is a chronic, usually slowly progressive illness but the rates of progression will vary from person to person.

When an individual develops a chronic, degenerative disease, he or she not only must face a myriad of physical changes, but must also confront significant psychological and social changes. These changes are often subtle and difficult for the patient to express to his or her physician. Yet research investigating the impact of chronic illness has shown that psychological and social factors may significantly increase disability and interfere with acceptance and adjustment to the disease (Cole et al, 1996).

Individuals with Parkinson's disease (PD) are faced with the challenge of coping with a chronic, progressive disease that will alter their lives in numerous ways (Frazier and Marsh, 2006). Understanding coping reactions and strategies and its impact on patients life is an area of great importance for patients, family members, and physicians. How an individual copes with specific stressful symptoms of the disease has a significant effect on overall function and well-being. Research on coping with PD has shown that patients who cope best use problem focused coping for management of symptoms and emotional-focused coping for living with the stress of being a patient with PD (Frazier, 2002 and Frazier et al., 2003). Frazier and Marsh (2006) encourage individuals to regard PD obstacles as challenges to be overcome, rather than hopeless barriers. They indicated that a positive approach allows for a sense of pride, control, and hopefulness that can lead to more effective coping. When considering the complexity of PD, particularly as it relates to the fluctuating changes of the

symptoms, understanding the benefit of specific coping strategies on overall function and quality of life is of great importance.

METHOD

Objective

The present study is aimed at studying the coping strategies being used by PD patients. The present study is that it attempts to investigate the coping discriminators which jointly contribute in the discrimination of PD patients from the normal subjects by using Discriminant Function Analysis.

Sample

The sample used in the present study consisted of two groups of subjects i.e. Clinical group (Parkinson's disease patients, N=100) and normal controls (N=100). The PD patients were selected from the patients who were attending the OPD of neurology departments at Post-graduate Institute of Medical Sciences (PGIMS), Rohtak, Post-graduate Institute of Medical Education and Research (PGIMER) Chandigarh, and Ram Manohar Lohiya Hospital, Delhi. The PD patients range in age from 45 to 70 years with the mean age of 57.5 years. The duration of illness in the PD patients included range from 5 to 15 years with the mean duration of 10 years. The sample consisted of both the males and females. Most of the patients were on L-dopa treatment. About 15 of the patients were on Sinemet treatment. All the patients were married and living in home setting with their family members.

A normal control group consisting of 100 subjects matched for age was drawn from the general population residing in various colonies of Rohtak and Kurukshetra cities. The normal subjects were found to be free from serious psychopathological and medical problems, which can confound the results.

Measures

Both the groups of subjects were tested with Ways of Coping Questionnaire (Folkman and Lazarus, 1988) which consists of 68 items to identify thoughts and actions an individual has used to cope with a specific stressful encounter. It measures coping processes, not coping dispositions or styles. The test items are subdivided in 8 coping scales to index 8 types of ways of coping such as Confrontive Coping, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving, and Positive Reappraisal. The reliability expressed in terms of alpha coefficients for 8 scales are ranging between 0.61 to 0.79. The face validity of the items has been examined in terms of similar meaning across the nationalities in various translations of the test. Evidences of construct validity has been found in the fact that results of the studies with the test are consistent with the theoretical predictions, namely, that (1) coping consists of both problem-focused and emotion-focused strategies, and (2) coping is a process.

Statistical Analysis:

Data analysis was undertaken using the SPSS 11.5. Descriptive statistics such as Mean, SD, S^2 , and KA were used to ascertain the normality of data. t-test was applied to compare the two groups (Parkinson's disease and Normal group) in terms of significance of difference in mean scores of 8 variables. Discriminant Function Analysis was used to examine the joint contribution of all the eight variables in differentiation of two groups.

RESULTS AND DISCUSSION

Table 1 reveals that Parkinson's disease patients have scored significantly low in Confrontive Coping, Self Controlling, Seeking Social Support, Accepting Responsibility, Planful Problem Solving and Positive Reappraisal positing that Parkinson's disease patients in comparison to the normal tend to make less efforts to alter their situation by regulating their feelings and actions; to seek informational, tangible and emotional support; to acknowledge their own role in the problems; problem focused efforts coupled with analytic approach to solve the problem and to create meaning by focusing on personal growth. Overall, the Parkinson's disease patients are less oriented to use both problem-focused and emotion-focused coping processes to deal with stressors related to their illness. It implies that they develop pessimistic viewpoint about the management of their illness and its outcomes.

Table 1. Mean, SD and t-ratios for compared groups (Parkinson's disease and Normal Group) N=100 each group

S. No.	Variables	Normal Group Mean & SD	Clinical Group Mean & SD	t-value	Sig.
1	Confrontive Coping	17.33 2.87	14.21 3.13	- 8.45	$p < .01$
2	Distancing	8.13 2.30	8.32 3.00	- .50	NS
3	Self-Controlling	18.37 3.10	12.61 3.13	- 13.33	$p < .01$
4	Seeking Social Support	18.76 2.63	14.23 2.60	-12.48	$p < .05$
5	Accepting Responsibility	15.49 3.70	13.06 2.81	-5.34	$p < .01$
6	Escape Avoidances	14.02 3.31	13.37 3.26	- 1.43	NS
7	Planful Problem Solving	17.55 2.83	13.00 2.67	-11.92	$p < .01$
8	Positive Reappraisal	14.30 3.28	12.49 2.50	-4.70	$p < .01$

Parkinson's Disease Patients VS Normal Controls: Discriminant Analysis

Although the comparison of mean scores of two groups on eight measures of coping provided the differential profile of Parkinson's disease patients and normal subjects, yet to examine the extent to which 8 variables jointly differentiate between the two groups, Discriminant Function Analysis (Tabachnick and Fidell, 1989) was applied. By identifying the significance of selected variables in linear combination, this analysis permits (1) the understanding of synergistic role of identified discriminators in the separation of the two groups (Parkinson's disease vs Normals), and (2) their classification accuracy, which is an additional indicator of the effectiveness of the discriminant function.

Table-2. Stepwise Discriminant Analysis with respect to patients with Parkinson's disease vs Normals Group (N=100 each group)

Variables	F-to-remove	Wilk's Lamda	Wilk's Lamda Decrement	Standardised Discriminant Function Coefficient
Positive Reappraisal	70.520	.704	.585	.858
Self Controlling	13.449	.553	.551	.401
Distancing	12.645	.551	.518	-.386

Canonical Discriminant Functions

Function	Eigen-value	%variance	Cumulative% variance	Canonical Correlation
1	.931	100	100	.694
Test of function	Wilk's Lamda	Chi-square	df	Significance
1	.518	129.314	3	.000

Table 2 provides a summary of the outcome of stepwise discriminant analysis. As can be noted, out of 8 potential discriminating variables, a set of only three discriminators i.e Positive Reappraisal, Self Controlling and Distancing formed the discriminant equation/function. These three variables in combination contributed maximally in discriminating patients with Parkinson's disease from their normal counterparts (Eigen value=.931). This also shows that Confrontive Coping, Seeking Social Support, Accepting Responsibility, Escape Avoidance and Planful Problem Solving did not comprise the discriminant function. Based on F-to-Remove values, the selected set of three discriminators were arranged in the rank order of their relative importance for discrimination/separation between groups of Parkinson's disease patients and their control counterparts as is clear from Table-2, Positive Reappraisal with largest F to Remove value, made the

highest contribution to the overall discrimination above and beyond the contribution made by other selected variables *i.e.* Self Controlling and Distancing. The values of Wilk's Lamda corroborated the observed group differences over the same set of three variables. Since Positive Reappraisal increased maximum within-group cohesiveness, this way of coping was the first to be selected followed by Self Controlling and Distancing in that order. The values of Wilk's Lamda decrement further confirmed the relative unique contribution of each variable to the discriminant equation above and beyond the contributions of proceeding variables. The magnitude of standard discriminant function coefficients regardless of sign also depicts the relative and unique contribution of each variable to the discriminant function (see Table 2).

The SDFC provided additional information to the conclusions derived on basis of the F-to-Remove and Wilk's Lambda/decrement values. SDFC values also documented that Positive Reappraisal contributed highest to the discrimination separation of the patients with Parkinson's disease and their counterpart normal controls (SDFC = .858) followed by Self Controlling (SDFC = .401) and Distancing (SDFC = -.386). The direction of significant differences in respect of these discriminators was generally consistent with the signs of SDFC loadings.

Classification Summary

Original group	Predicted group membership		Total
	Group 1	Group 2	
1	83	17	100
2	16	84	100

83.5% of original cases correctly classified

In discriminant function analysis another important question is the accuracy of classification based on identified set of discriminators. Klecka (1985) suggested that classification accuracy can be used along with F-to-Remove, Lamda, and SDFCs to indicate the amount of discrimination contained in selected variables. However, he pointed out that if chance of accuracy is 50% (two groups of equal size), the classification accuracy should be at least 62.5% (25% greater than that is achieve by chance), based on discriminant function (comprising Positive Reappraisal, Self Controlling and Distancing), the correct classification rate for Parkinson's disease patients is 84 (84%). The corresponding classification accuracy for normal controls group is 83 (83%). Thus, in Parkinson's disease group 16 of 100 cases (16%) were misclassified, whereas in respect of normal groups, 17 of 100 (17%) cases were incorrectly classified. The overall classification accuracy of known cases emerged to be 167 out of 200 (83.5%), a percentage higher than 62.5%. It provides an additional confirmation of the degree of group discrimination/separation *i.e.* between Parkinson's disease patients and normal group. Thus, lack of positive meaning focusing on personal growth.

inability to regulate their feelings and actions, and cognitive efforts to detach themselves from the imagined outcomes of their illness are hallmark thoughts of Parkinson's disease patients which discriminate them from normal individuals.

The findings of the present study characterizing the patients with Parkinson's disease document them to be significantly low on both the problem-focused and emotion-focused coping processes than their counterpart normal controls. Lazarus has recognized two main types of coping processes: problem-focused which are oriented to find direct resolution for the problematic situation and life stressors; and emotion-focused which deals chiefly with emotional responses to the stressors (Ellgring, et al., 1993). It has been reported that patients with Parkinson's disease who adopt problem-focused and cognitive restructuring coping processes tend to have better psychosocial outcomes and better adjustment with their illness; and who adopt emotion-focused coping tend to have poor adaptation with their illness (Frazier, 2002). But those who are low on both types of coping processes tend to have exhausted all the adjustment resources and have started to use more maladaptive strategies (Frazier and Marsh, 2006). It may be because of the feelings of being stigmatized by the disease, perception of the disease to be worst chronic and incurable, troubled by society's perception of them as inefficient, and by the discrimination and lack of compassion others show to them (Endler & Parker, 2000).

The present findings depicting the participant patients to be low on both the problem-focused and emotion-focused coping processes appear to be explainable in the light of findings of above mentioned studies. In this regard Krakow et al. (1999) have suggested that chronic pathologies often bring about a vicious cycle in which difficulties in adjustment lead to reinforcement of inefficacious behaviour and of scarce acceptance of the illness, which in turn, results to the exacerbation of illness. Ruminations about what might have been and feeling of self-pity may take place leading patients to avoid appropriate coping processes and health practices.

A special feature of this study is the identification of three discriminators and their relative power on the basis of a simultaneous consideration of multiple indices of discrimination such as F-to-Remove, Wilk's Lambda/decrement and Standardized Discriminant Function Coefficient. The discriminant function synergistically separated patients with Parkinson's disease from their counterpart normal comprised of Positive Reappraisal, Self-Controlling, and Distancing. Their high degree of classification accuracy further confirmed the effectiveness of discriminant function and the degree of separation. Out of the three discriminators, Positive Reappraisal has emerged the most potent discriminator along with Self-Controlling and Distancing.

It is well understandable in the light of earlier findings that in case of chronic disease like Parkinson's disease a patient feels stigmatized, low self-

esteem, unfavorable attitudes of others to the disease, lack of social and emotional support, reduced self efficacy, it is natural for the patient to exhaust all the adjustive resources which in terms leads to the development of cognition in the patients characterized by lack of efforts to create positive meaning focused on personal growth, lack of efforts to regulate their feelings and actions positively, and inability to detach cognitively from the anticipated ill-consequences of the disease. Hence, the present findings are suggestive to the health professionals/ neurologists/ physicians to take into account the coping processes particularly the positive appraisal, along with the symptoms in the diagnosis of Parkinson's disease and in the treatment/management programs for Parkinson's disease patients. Psychotherapists may focus on enhancing positive appraisal, self control and reducing distancing in Parkinson's Disease patients for their well being.

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STUDY OF IDENTITY AND WELL BEING AMONG ADOLESCENTS

Alka* and Nov Rattan Sharma**

ABSTRACT

Adolescence is a particularly hard time for children. During this period they experience all kinds of new changes in their body and in their feelings. They often feel misunderstood as they are struggling to leave behind their childhood and become adults. Knowledge of own identity is a major issue in the adolescent period. There are many researches which explain the important role of identity in the development and growth of the individual. Many of the life style habits are developed in this early age which affects the adolescents' health and well being. The adolescents who are having poor sense of identity status, their well being is likely to be poor. This study was conducted on 100 students (50 boys and 50 girls) studying in 11th and 12th classes of the Bhiwani city schools. These participants were tested on the two measures i.e. Ego Identity and Subjective Well Being. The findings of the study reported that the identity is positively correlated with the well being of the adolescents which illustrates that the pattern of identity formation enriches the adolescents' well being. There are significant gender differences in identity and well being. The study further emphasis the need of identity formation of adolescent girls and boys adequately.

Keywords: Identity, Well being, Adolescents

Adolescence period is associated with the substantial changes in the various parts of self. The change is not accepted by the adolescents because all the changes are beyond their understanding. In the adolescents life identity plays an important role. Identity formation is the activity that adolescence seeks actively. They attempt to categorize themselves and define themselves through certain

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activities. It has been proven that families may contribute to their teens to express their own views, enhance their identity formation pattern.

Everyone wants to lead a good life and even desires of peaceful and meaningful life. In the age of adolescence as well being well is the most important factor. Quality of life composed by physical, social and psychological well being. Well being, happiness and other positive aspects are subjectively experienced by the individual. Subjective feeling of contentment, happiness and satisfaction with one's life experience and no distress depicts a person's general well-being which contributes to high resilient to stress in the person (Verma & Verma, 1989). If a person is stress free he/she satisfied with their life and they enjoy the happiness of peaceful and meaningful life.

But in the 21st century to lead a stress free life is quite difficult, because of the competition. By pushing to one another, every wants to become first in the race of life. In the age of adolescence leading a happy and stress free life seems impossible. Because, adolescence is the age of human life which is characterized by rapid change in physical, psychological and social maturation. Adolescent's well being is relatively broad concept, referring to good or satisfactory condition of existence. Singh and Tripathi (2010) observed perceived quality of life has remained a neglected component of adolescent's health assessment and intervention. Studies showed that d to higher or lower level of psychological well being in adolescents are stress related (Siddique & Arey 1984). Vanwell, Linssen and Abma (2000) have shown in their study that a quality of relationship within families especially parents are a major determent factor of psychological well being in adolescents. It has been observed that strong positive interpersonal relationships are beneficial as they are the treasure of comfort as well as safety/ security throughout the life threats occurring in adolescence period.

Field (2001) observed that depression is negatively related to students' success, grade point averaged, less time spent on homework. Seligman (2002) suggested that pleasant and meaningful life can be built on the happiness that results from using the psychological strengths which promotes the well being of individual. Lyubomirsky, King and Diener (2005) showed that happy people are successful in many life domains and that this success is at least partly due to their happiness. Happiness and life satisfaction are the positive effects of life. Both tell above the well being of an individual. As much more is known about negative effects of depression on student success than about the benefits of happiness and life satisfaction (Khramtsova, Sarrion, Gordeeva, & Williams, 2007). In an earlier study Crompton (2005) observed that Happiness increases the level of well being. Khramtsova, et.al (2007) agree that happiness is an emotional state which emphasis the more global cognitive evaluation of one's self.

Demographical variables such as age, race, gender, income, relationship status and education also have been found to show an impact on subjective well being (Gutierrez, Jimenez, Hemandez & Puente, 2005).

Well being and identity formation both are closely related to each other. Identity develops a great deal during adolescent. Teens will describe themselves in more varied and general ways than they did earlier, indicating that they are attempting to bring together all of their multiple ideas of their identity into one true identity. Identity formation is an activity that teens seek actively. There may be many factors which are helpful for adolescent to gain the positive pattern of identity such as family support, friends, social support, positive home environment. There are many studies which demonstrated that there is a strong relationship between identity and well being. Many researches have also identified that many personality traits have different relationship with different identity status and well being.

Mracia (1967) studied that diffusion and foreclosure subjects are significantly more vulnerable to experimental manipulation of self esteem than identity achievement and moratorium group. Clancy and Dollinger (1993), Muuss (1996) reported that low self esteem in diffusion subjects, moderate self esteem in moratorium subjects, and high self esteem in foreclosure and identity achieved subjects.

Cramer (1997, 2000) observed a strong relationship between identity and self esteem. Higher self esteem is related to identity achievement while the diffusion of identity has been found to be associated with low self esteem. Cramer (1995) interestingly, observed a modest negative correlation between self esteem and moratorium. Author suggests that young adult who fail to advance on the identity pathway toward a committed identity has to take its toll in self esteem.

Graf (2003) found that Indian adolescents are more foreclosed as compare to American adolescents. However, Chun and Mac Dermid (1997) found that individualization seems to be associated with high self esteem among Asian adolescents. Some other researches also supported that encouragement for self development in adolescents is mediated by the socio-economic status in Asian society. Reddy and Gibbson (1999) supported above study and observed that upper class Asian Indian families favor self-reliance and autonomy for the development of adolescents, on the other hand, lower class families encourage children towards conformity to parental values and stands. Like self esteem and self reliance, self confidence and efficacy are also helpful in improving the well being. According to positive psychology, high sense of self confidence and efficacy are the important factors for enhancing the quality of life as well as educational achievement. A satisfied, confident and happy individual with sound mental health and physical status are prerequisite condition for excellence.

So, it has been found that an Identity achievement permits well-being and control over future overcomes, thus, generate a positive affect (Baumgardnu, (1990). Kahn, Zimmerman, Csikzentmihali & Getzels (1985) also supported the

above finding that Identity was strongly associated with Life-satisfaction and Happiness.

Hofner, Busch and Kartner (2011) reveal in their study that a positive identity provides an integrative vision that one hope to generate enthusiasm and provide direction for much larger body of work that is to follow. More so a firm identity may significantly promote well being with a feeling of continuity in life. A study done by Salami (2010) found that high self efficacy along with emotional intelligence and happiness inspired the students for better learning and to develop positive attitude toward learning (Faulkner and Reeves, 2009). Another study regarding self efficacy and well being reveals that high self efficacy works as resilience between stressors and depression. Students with low self efficacy having health complaints are linked to depression (Flett, Panico & Hewitt, 2011; Schwarzer, & Fuchs, 2009).

Like above factors of identity, there is one more factor *i.e.* sense of control is also having close relationship with well being positively. Ward (2011) reported that higher personal mastery and lower perceived constraints were associated with better self-reported health. Gupta (2012) also supported the above evidence and suggested that there is a strong relationship between self-concept, efficacy with well being. Authors found that high self efficacy enhance the well being among the adolescent students.

There are many studies which revealed the fact that lack of healthy identity is linked with the various forms of antisocial behaviour, especially delinquency. Erikson's (1968) study showed that the adolescents who turn to delinquency, they do so, because they are not able to resolve key psychosocial tasks in particularly, they lack confidence in their occupation skills, which lead to a poorly formed sense of identity. This also has been supported by researchers like Ryan & La Voie (1986), White & Jones (1996), Rotheram-Bours (1989) who found that youth who engage in problem are having unhealthy identity status as compare to those who are normal.

In nutshell, above researches indicated that a strong relationship exists between the identity and well being. If a person has strong identity or personal values like self-esteem, self confidence, self reliance etc. is likely to enjoy high level of well being. It also emerges that the factors such as gender, family support, culture etc. are influencing the both *i.e.* identity and well being. So, the present study was planed to study the identity and well being among adolescents.

METHOD

Objectives

Objectives of the study are

1. To study and compare the Identity of the male and female adolescents
2. To study and compare the Well being of the male and female adolescents.

3. To study the relationship between Identity and Well being of the adolescents.

Hypotheses

The following hypotheses are formulated:

1. There would be no significant difference between male and female adolescents on Identity.
2. There would be no significant difference between male and female adolescents on Well being.
3. There would be a positive significant relationship between Identity and Well being of the adolescents.

Design

The present investigation was conducted by using two independent group design, however, at a later stage a co relational design was used to assess degree and direction of the association between study variables.

Sample

The sample comprised of 100 students studying in the 11th and 12th standards of the schools located in Bhiwani city of Haryana was selected on the basis of non-random procedure. There were 50 boys and 50 girls. All the participants belong to middle socio-economic class of the urban population.

Instruments

Extended Objective Measure of Ego- Identity Status-2- Bennion and Adams(1986): This tool is consisting of the 24 items which measures the identity formation on two domains-ideological domain (which includes area like occupation, religion, politics and philosophical life style) and interpersonal domain (which covers areas like friendship, recreation, dating and sex roles). Only the areas of friendship and recreation were studied in the interpersonal domain, and the areas of dating and sex roles were excluded because of their inappropriateness for Indian adolescents. Test-Retest reliability ranged from 0.73 to 0.91.

Subjective Well Being Inventory (SUBI) : The inventory originally has been developed by Sell and Nagpal (1992). This is a comprehensive potent tool for assessing indicators of health. The tool has been developed by 'stepwise ethnographic exploration process. After a statistical treatment and factor analysis on the item pool, a 40 item inventory was accepted that assess subjective well being on eleven factorial dimensions. The SUBI has been adopted by WHO. These dimensions are – General well being positive affect (GWB-NA), Expectation- achievement congruence (EAC), Confidence in coping(CC), Transcendence(Trans), Family group support (FGC), Social support(SC), Primary group concern(PGC), Inadequate mental mastery(IMM), Perceived ill health

(PIH), Deficiency in social contacts (DSC) and General well being- negative affect (GWB-NA).

Procedure

Both the tools were administered on the participants one by one under the constant supervision. Before the administration of the tools, the standard general instructions were given to all the respondents, however, the specific instructions relating to pertinent instrument were narrated from the test manual. After the random administration of the tools, the scoring of the each questionnaire was done according to their manual specifications. The data was collected after seeking the informed consent from the participants. The scores on identity and well-being measures were analyzed with the help of t-test and Pearson Correlation method.

RESULTS AND DISCUSSION

The major objective of the investigation is to study and compare the male and female adolescents on identity and well being along with the possible relationship between the two. The data obtained was treated with suitable statistical procedure and findings were discussed accordingly.

Table 1. Mean, SD and t-value of male and female adolescents on Identity

Gender	Mean	SD	t-value
Male (n=50)	68.06	17.39	6.39*
Female (n=50)	49.30	11.27	

* $p < .01$

It is evident from the Table 1 that male adolescents are showing higher score on identity than the female adolescents. The mean difference was statistically checked with the help t-test which is significant at .01 level. This result suggests that males pattern of identity formation is significantly different from the females. This may be because of the fact that socialization pattern of the Indian culture is gender specific in which boys are considered superior than girls. In this way it is proved that there are significant gender differences in identity scores. Women in general and the poor minority women in particular, report high levels of stress poor well being and diffused identity (Sahu & Rath, 2003), Sharma & Sharma. (2010) observed that the understanding of Gender specific self/social identity is very much important. Hence, the first hypothesis which stated that "There would be no significant difference between male and female adolescents on Identity" is hereby rejected.

Table 2. Mean, SD and t-value of male and female adolescents on various factor of subjective well being

Factors of Well being	Mean	SD	t-value
GWP- PA(Male, n=50)	7.56	1.21	.78
(Female, n=50)	7.40	.808	
EAC(Male, n=50)	7.08	1.49	4.63**
(Female, n=50)	8.30	1.11	
CC(Male, n=50)	7.60	1.01	2.00*
(Female, n=50)	7.20	.990	
Trans(Male, n=50)	8.04	.832	4.24**
(Female, n=50)	7.30	.909	
FGS(Male, n=50)	7.82	1.13	7.60**
(Female, n=50)	6.40	.670	
SS(Male, n=50)	7.82	1.10	3.88**
(Female, n=50)	7.00	1.01	
IMM(Male, n=50)	14.50	2.80	1.48
(Female, n=50)	13.90	.544	
PIH(Male, n=50)	14.84	2.75	9.44**
(Female, n=50)	9.60	.279	
DSC(Male, n=50)	5.96	1.32	.78
(Female, n=50)	5.80	.606	
GWB - NA(Male, n=50)	6.10	1.52	4.88**
(Female, n=50)	5.00	.452	
SUBI overall(Male, n=50)	85.63	7.06	3.06*
(Female, n=50)	81.00	8.18	

* $p < .05$ ** $p < .01$

Mean scores and t-value shown in table-2 are indicative of the fact that male and female adolescents significantly differ on many factors of subjective well being including EAC, CC, Trans, FGS, SS, PIH, GWB-NA and SUBI overall, where as a non significant mean difference was observed in GWB- PA, IMM and DSC factors of Well being.

This further reveals that male adolescents are better on all the measured factors of well-being except EAC where female adolescents have shown significantly higher scores.

Results clearly demonstrate that there are significant gender differences in respect to well-being. Sharma & Sharma, (2010) concluded that psychological well being of male and female groups may differ significantly owing to certain sociological and cultural factors. Therefore, the 2nd hypothesis which stated "There would be no significant difference between male and female adolescents on Well being" is not accepted.

The overall gender based findings of the present study may be explained in the light of socialization pattern of Indian society. Researches reveal that gender is an important factor of investigation, generally males are viewed as superior to females in Indian culture, and women have to borne the social discrimination in almost every sphere of life, resulting inferiority feelings, poor personality development and unhealthy identity formation among girls. The findings are also supported by Ginsburg and Orlofsky (1981), who found that woman has the certain stability in identity that contributes to her adjustment. But this may be only superficial adjustment. This aspect in Indian female might gain more importance, because in India socialization pattern inculcate a strong feelings in the girls that their identity has no value without the reference of man. Asian Indian families expect from female to maintain a subordinate role and not assume decision making power (Kakar 1978, Rao & Rao 1982;).

In order to determine degree and direction of relationship between identity and factors of well-being, coefficient of correlation were worked out.

Table 3. Coefficients of Correlation between Identity and the factors of Well being

	SUBI	GWB-PA	EAC	CC	Trans	FGS	SS	IMM	PIH	DSC	GWB-NA
Identity	.52**	.26**	-.47**	.28**	.49**	.60**	.51**	.08	.75**	.01	.33**

** $p < .01$

Table 3 indicates the positive correlation of identity with well being factors. The value of correlation is found to be significant at .01 level which means that a healthy identity status may lead to enhance the well being of the adolescents. However, an insignificant correlation exists between identity and two factors of well being, Inadequate Mental Mastery (IMM) and Deficiency in Social contacts (DSC), and the dimension *i.e.* Expectation Achievement Congruence (EAC) is negatively correlated with identity which implies that they inverse each other.

Results regarding the relationship between both the variables further reveal that there is a strong relationship between the identity and well being. Findings show that a healthy identity helps the adolescents to adjust with environment and for the better well being. Nammalvar and Rao (1983) also observed that a well integrated identity may fortify the ego and strengthen its defenses to cope with problems. The adolescents who have strong pattern of identity formation hardly fail in their achievement. People with strong sense of self esteem, self confidence and self efficacy reported higher level of subjective well being (Tong, & Song 2004). On the basis of the large positive and significant correlations, the third hypothesis which stated "There would be a positive significant relationship between Identity and Well being of the adolescents" is accepted.

The overall results, thus, emphasize the importance of identity for the better well being. So, the parents and teachers should make efforts to develop

healthy identity formation so that adolescents may enhance their well being as well. The implications of these results lies in that the family is the essential source of love and courage, that may be most instrumental in promoting confidence and self-esteem, efficacy and the other personal factors in their Children without any gender discrimination.

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SOCIAL SKILLS TRAINING WITH A CHILD WITH LEARNING DISORDER

Parisha Jijina* and Uday K. Sinha**

ABSTRACT

Studies have consistently shown that children with Learning Disorders have deficits in social skills. This paper is a case-report of a nine year old girl diagnosed with Disorder of Mixed scholastic skills. The child also had deficits in social skills due to which she had difficulties in peer relationships and was constantly embroiled in fighting and teasing. The dynamics of this case are presented with reference to the literature, personal temperaments and dysfunctional beliefs of the child and also the environmental conditions. To improve her social skills using effective techniques, a program of eight sessions based on Spence's 'Social Skill Training' method was applied. The areas focused on were Social perception, Understanding feelings, Conversation-listening skills, Anger & Relaxation, Peer relationship skills and Dealing with conflicts. Multi-media videos were also used in the social skills training process. The mother simultaneously participated in generalization training designed to support her child's transfer of skills. Each session of the social skills training program are presented in detail. Pre and post training assessment was conducted. There was a post training increase in the social skills scores obtained on the measures and mother too reported a significant improvement in the social skills of the child.

Key Words: Social skills training, Learning disorders

Learning disorders (LD) are developmental disorders characterized by clinically significant impairment in scholastic skill (reading, writing, spelling or

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arithmetic) which is not accounted for by mental retardation, neurological disturbances or inadequate schooling. The associated problems with LD include inattention, over-activity and emotional disturbances. Studies have also consistently shown that children with LD have deficits in social skills, which are central to an understanding of these children. Social skills have been defined as situation-specific behaviors that enhance the overall social functioning of a person, resulting in personal and social satisfaction (Mathur & Rutherford, 1994). Social skills training aims to increase the ability to perform key social behaviors that are important in achieving success in social situations. This case-report is about a nine year old girl diagnosed with Disorder of Mixed scholastic skills, the child also had deficits in social skills for which Social Skills Training was provided, further details of which are presented below.

Case

The child's mother reported that since the child was six years old, she had difficulties in academics particularly in reading and writing. The child's handwriting was poor and she would make a lot of mistakes in grammar and spellings. Her concepts of Arithmetic were also poor.

The child also had significant difficulties in establishing and maintaining peer relations at school. She used to roam around alone during lunch breaks. She would be embroiled in a lot of teasing frequently in school. The child had difficulty in controlling her anger with peers and would get into a lot of physical fights. The mother also reported deficits in micro-level social skills i.e. poor eye contact, aggressive facial expressions and body language.

Treatment sought: The child had come to the Child Guidance Clinic of IHBAS and was diagnosed as Disorder of Mixed scholastic skills. She was then referred for social skills training.

Psychological Assessment

Psychological assessment was warranted to assess the nature and level of social skills deficits. Social Competence with Peers Questionnaire (SSCPQ) (Spence, 1995) Social Skills Questionnaire (SSSQ) and Maston's Evaluation of Social Skills for Youngsters (MESSY) were employed. Test findings indicated below average level of social skills and social competence.

- Studies examining social skills of children with LD showed that 75% of students with LD had deficits in social skills (Kavale & Forness, 1995).
- *Socio-cognitive skills*: Children with LD have deficits in social perception (Bauminger, Edelsztein & Morash, 2005), deficits in self-monitoring (Reid, 1996) and are able to generate fewer alternatives for social problem situations (Toro et al, 1990).
- *Dysfunctional assumption*: She had the assumption that "tede ke saath tede hi rehnaa chahiye".

- *Lack of peer opportunities outside school:* This child also had no opportunities for interacting with children outside school.

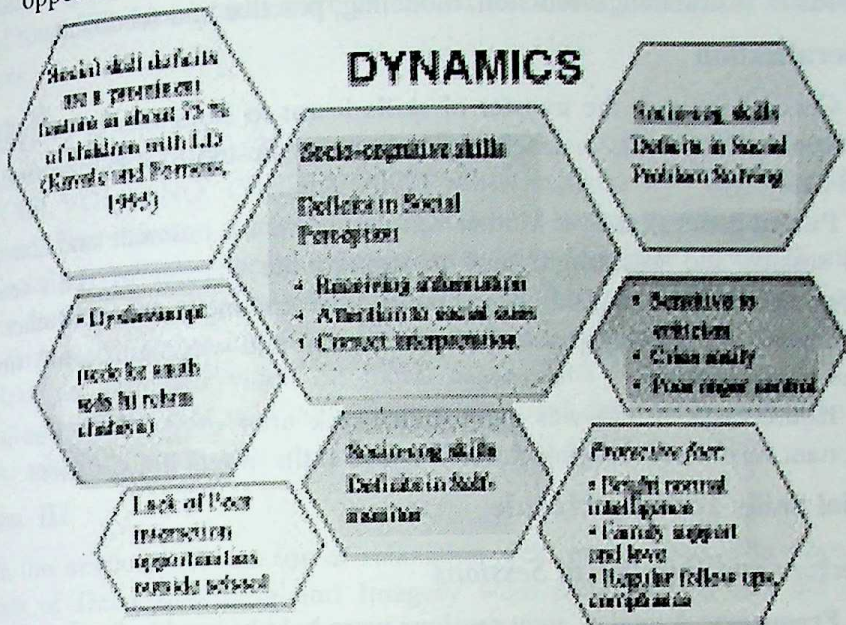


Figure 1: Dynamics of the Case

- *Temperamental factors of the child:* According to mother, child is sensitive to criticism, cries easily and has poor anger control.
- *Protective factors in the child:* Bright normal intelligence and psychologically sophisticated parents who are regular with follow-ups.

Management Plan

- To improve social skills of the child using effective techniques
- To involve parents in training process



Figure 2: Target areas of management

The social skills training program of this study is based on Spence's 'Social Skills Training' (1995) for children aged 5 -18 years. This program uses the methods of instruction, discussion, modeling, practice and feedback.

Generalization

Generalization is the transfer of skills learnt to situations of everyday life. Involvement of parents or teachers has been suggested to make generalization more likely.

Parent generalization: Mother was explained the rationale and activities of each session and was taught how to support the transfer of skills learnt by prompting and rewarding skill usage outside the training sessions. Mother would also observe the training process when essential and was significantly involved in the home-tasks.

Home tasks: Child was given home-task after every session as it is an important way of encouraging children to use skills in real life situations.

Social Skills Training Module

Structure and Duration of Sessions

Frequency: A total of eight sessions were held bi-weekly for duration of 75 minutes each.

Session materials: The child had a printed record of whatever was taught in each session. A separate hand-out would be given to the mother about homework details.

Use of multimedia: Five age-appropriate standard social skills videos available on the Internet shown to child to enhance her understanding.

SESSION WISE DETAILS

Session I

Normalizing the rationale The rationale for attending the sessions was normalized. A video (Irised online, n.d.)- A peppy song about how easy it is to learn social skills was shown to her and the positives of attending the program were highlighted.

Eye contact: The concept of eye-contact was introduced through discussion, art activities and an animated video (Wonkido, n.d). The trainer demonstrated the impressions of too little eye contact. Appropriate use of eye contact was then modeled by the trainer and the child practiced it. Constructive feedback was provided.

Understanding feelings: The session then focused on 'Understanding Feelings' through activities such as discussion and making a list of all the different feelings. The concept of feelings being weak, strong or very strong was explained with 'THE FEELING THERMOMETER' (Stellard, 2002).

Story-telling was further used— 'Tom's Birthday Feelings' was read out and paused at certain points where she had to guess how Tom was feeling at that point of time. The home-tasks were explained and a recapitulation of the session was done.

Session II

Anger and relaxation: The concept of anger was explained with illustration of 'ANGER VOLCANO' (Stellard, 2002) which explains how anger builds up inside and if not released safely; it can explode and hurt us or others.

Social perception- Facial expressions & body language: It was discussed that our feelings are also shown by the way our face and body looks. Spence Photo cards were used to identify different body postures and facial expressions.

Next, an animated video on facial expressions (Khappucino, n.d) was shown to her. The child was then given a cue card describing a situation and she was asked to demonstrate the likely posture and facial expression.

Session III

In this session the benefits of relaxation were emphasized. The relaxation methods of Deep Breathing and Imagery were demonstrated and the child practiced them.

Conversational skills: The trainer demonstrated how tone of voice could convey information about feelings. The child was then asked to make a list of what is needed in a good conversation and each component was discussed in detail. The trainer then modeled appropriate ways of asking questions. Child then practiced conversation skills with trainer, using cue cards and role-plays. Ways of keeping conversations going once were started and discussed. The main points covered were the need of adequate length of responding, showing you are listening and asking further relevant questions. Conversation cue cards were also used for role-plays.

Session IV

Importance of friends: This session was handled very sensitively- her abilities to make friends were never challenged. An animated video (Note book babies, n.d) was shown to the child that highlighted the value of friends.

Sharing & offering help: The benefits of sharing offering help and were discussed. Sharing and helping behavior were modeled by the trainer. Cue cards were given about such situations and the child had to role-play with trainer.

Joining in play and taking turns: A video (Wonkido, n.d) about appropriate ways of asking to join in play, was shown to the child and was role-played. The importance of taking turns during play was also emphasized. For example: "If you want to play hide and seek but your friend wants to play badminton, instead of fighting you can take turns playing both games and then both will be happy".

Session V

Social problem solving: It was emphasized that rather than rushing in to solve problems, we need to Stop and Think! The 'What Can I Do' game was played where the child was presented with a problem and she had to think of different solutions to each problem.

The child was explained the STOP, THINK, DO method. The trainer made it easy for the child to understand by connecting it with a traffic signal. Red means STOP and thinks about what the problem is. Yellow means THINK - about the different solutions and their consequences. Green means DO - i.e. carry out the chosen response keeping in mind social skills. Examples of social problems were taken and solved through this method.

Saying NO- without being aggressive: The focus of this session was on Assertiveness. It was emphasized that all people have the right to say 'no' (without being aggressive) when something feels wrong. The child was then explained the concept of assertiveness on a dimension of:

Submissive ————— Assertive ————— Aggressive

The trainer then modeled saying 'No' assertively. Using the STOP, THINK, DO method, social problems of the type were taken up with role-plays.

Session VI

Bullying and teasing: The focus of this session was dealing with bullying and teasing. Fighting and screaming were highlighted as ineffective ways of dealing with teasing. STOP, THINK, DO model was used to look at better alternatives of dealing with teasing. Asking an adult to intervene if the situation goes out of hand was also emphasized. The belief that the child had, 'tede ke saath teda hi rehna chahiye' was also discussed.

Dealing with conflicts with peers and adults: The importance of being able to communicate feelings to other people in a friendly and calm way was stressed. Examples of conflict problems with peers and adults were taken and solved through STOP, THINK, DO method.

Session VII (Preparation for termination)

Self-esteem: Two techniques were used to help the child internalize strengths that she desired: Super Me technique by Nickerson and Shazam (both cited from Hall et al, 2002). In the Super Me technique, the child was told to write down ten good qualities that she would give to her super-hero and she then created this super-hero artistically. The child then made a story of the super-hero and her solving a problem together. In the Shazam technique, the child was told that this super-hero remains with her at all times to help her

To facilitate termination, child was given the confidence that she has learned the skills which she has applied in other settings also (through home-tasks). She was assured that if she faces any problem she can always discuss with

parents or can contact even trainer. The mother was also suggested to keep revising the social skills with the child and to use social reinforcements. A quick recapitulation of the first three sessions was also done.

Session VIII (Termination of training)

Review of remaining sessions was done in a fun quiz format. It was observed that the child understands and application of social skills had significantly improved through the progression of sessions. The child was reminded that Super girl is always there to help her. Mother was reminded to revise social skills at home and & reinforce.

Outcome

Once the training sessions were completed, post-training assessment was carried out with the same tools. Post-training there was a significant increase in the social skills scores obtained on the three measures- test findings now indicated an improvement in the social skills and social competence of the child.

The Mother's narratives were recorded to have a better understanding of the process of change experienced by the mother in the child. On the basis of the mother's report, improvement is indicated in facial expressions, peer relationships, and eye contact. Mother also reported a decrease in fighting with school mates and better anger control- the child would attempt to control her anger through the breathing exercise. Also there was a reported decrease in fighting with brother; the child would attempt to think of different solutions with the brother instead of using physical violence.

CONCLUSIONS

Thus we can conclude that:

- There was an improvement in the social skills of the child post the time-limited and structured social skills training.
- Parents can be included meaningfully in the social skills training process.
- Technology and Internet is a useful asset in aiding social skills training.

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POETRY READING: A MEANS FOR HEALTH PROMOTION

Nupur Munshi* and Manjula Mukerjee**

ABSTRACT

Poetry is an art form that can be used as a means to reduce stress. This article is an attempt to explore poetry and a few poetic renderings to see whether it can be used as a stress-buster. Of all literary forms of art, poetry has its own flavor-meter, language, imagery, diction - all of which combine to form what is known as the art of poetry. Selected extracts from the greatest gems of poetry have been quoted. Stress is felt in modern lives and the negativities of stress can pose serious health problems. Man can overcome stress by using stress-relief devices like practicing yoga, listening to music, or even reading poetry. Poetry is inspirational, creates fantasy and can be used as a medium of diversion, relaxation and optimism. Reading or rather reciting poetry can be a type of an effective defense mechanism to divert the mind from negative stressful feelings. Reading poetry develops understanding in perceiving self and others, creativity, new ideas and insights, increase adaptability and ability to express self. These criterions may help reduce stress. Some scientific studies conducted worldwide with findings have been cited to show how poetry has been used from the ancient times till now as a universal healer.

Key Words: Poetry, Art, Stress, Defense Mechanism, Healer

There is an "inherent healing power" in art, it is a means of "symbolic communication" because "it imitates the method of Nature and makes its most beautiful works out of material that are themselves beautiful" (Santayana. 1997). So when it is perceived by an individual, images of it journey across the three

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layers of human consciousness; the outer layer (the *Murta*) composing attention, sensation and perception, the inner layer (the *Bimurta*) composed of imagination, memories and feeling and the inner core (the *Saraswat*) which is the seat of expression of inner harmony between the living entity and its surrounding. This journey across the three layers causes changes in each layer and provides different experiences to the individual. When it reaches the inner core of consciousness, the seat of reasoning, man feels a sense of completeness (Duttaroy, 2010).

Reading Poetry and doing Yoga both require high level of concentration. So when we read an enriching poem or practice yoga deeply absorbed in it, it helps "keep inappropriate or unwanted thoughts and impulses from entering the conscious mind. (Cherry, 2000) "The restorative benefit" derived from poetry renders this form of art a therapeutic quality almost like yoga or meditation. While yoga uses various "*asanas*" or postures, meditation and breathing techniques, poetry uses words, figurative language, imagery and musical effects that give it a "heightened power". Yoga and Art (poetry in this case) can induce that sense of completeness required for mental and emotional well being. So can we use poetry, one of the most stimulating art forms, to reduce stress?

Physician Hans Selye defines 'stress' as a 'non specific response of the body to any demand characterized by the secretion of glucocorticoids' that can produce mental tension or physiological reaction. If people can manipulate their thought process and disengage the mind to have a positive feeling through techniques like exercise, meditation, deep breathing, they can cope with unwanted stress. Reading is a proven stress-relief device. British researchers have found out that reading can reduce stress because the "distraction of being taken to a literary world eases the tension in muscle and the heart".

A group of volunteers at the University of Sussex participated in the research. Stress level and heart beat of each volunteer was increased through some experiment. When they were given a variety of methods of relaxation including reading, reading 'worked best'. It reduced stress levels by 68%. David Lewes, a Cognitive Neuropsychologist, said "This is more than merely distraction but an active engaging of the imagination as the words on the printed page stimulate your creativity and cause you to enter what is essentially an altered state of consciousness" (The Telegraph, 30th March, 2009). The reading material that has the maximum capacity to engage the mind is poetry because of all forms of writing, poetry with its 'colour and choice of words, the fanciful, rich or exquisite juxtaposition of phrases, most poignantly creates an imaginary world' and the readers get completely absorbed in it. (Santyana, 2007)

Let us consider some lines of Wordsworth's Daffodils:

I wandered lonely as a cloud

That floats on high o'er vales and hills

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*When all at once I saw a crowd,
A host of golden daffodils;
Beside the lake, beneath the trees,
Fluttering and dancing in the breeze.*

— (From Daffodils by William Wordsworth)

These splendid lines of Wordsworth (written almost 150 years ago), take us to distant places. They arouse our imaginative faculty with their beautiful choice of words, rhyme and meter and our mind moves from the real to the imaginary world where we can fantasize the beautiful golden daffodils “fluttering and dancing in the breeze”. George Santyana points out in the Element and Function of Poetry that “painting, architecture and gardening with the art of stage setting has the visible landscape for their object.... But there is a sort of landscape larger than the visible, which escapes the synthesis of the eye, it is present to that topographical sense by which we always live in the consciousness that there is sea, that there are mountains that the sky is above us, even when we do not see it This cosmic landscape poetry alone can render.’ If any medium carries the mind to dwell in these distant places (without actually ‘seeing’ with our naked eyes), it is poetry.

War fighters and soldiers of various regiments feel the burden of stress. At Spin Boldak Kandahar, Afghanistan, soldiers started a monthly poetry reading session. Capt. Tammy Summers said that when she started “poetry night” few people attended at the beginning but later the numbers began to increase. One of the soldiers who read poetry felt that “It creates a calming atmosphere” (Thomas, 2010). Poetry develops optimism which is one of the practices to cope up with stress. Poetry uses the ‘aesthetic qualities of language’ to render lines of optimism that creates a moving response when a reader reads through the lines. Milton’s *Paradise Lost* (written to ‘justify the ways of God to men), a great work of poetry, can be read at times of depression, to derive didactic knowledge or simply for pleasure. Who else but the poet can render these lines of optimism?

“What thou the field be lost?

All is not lost, the unconquerable will

And courage never to submit or yield

And what is else never to overcome?

— (From *Paradise Lost*, Book I by John Milton)

Not only the content but the form or structure of poetry can also act as a stress-buster. Alternating pattern of stressed and unstressed syllables in lines form a meter in poetry that makes its reading pleasurable and meaningful. (Abriza, 2011) In a study, twenty healthy volunteers were made to perform three different exercises: 1) recitation of a hexameter verse from ancient Greek literature,

2) controlled breathing, 3) spontaneous breathing. Results revealed that recitation of the verse most strongly influenced the “respiratory sinus arrhythmia (RSA) of heart rate by prominent low frequency component in the breathing pattern, generating a strong cardio respiratory synchronization” (Cysarz, et al 2004). Chanting or reciting of *mantra* and *slokas*, for example, can bring about that “synchronization.” A conventional Hindu practice, ‘*Mantras*’ are short phrases arranged in verse form. One can attain peace of mind by chanting a *mantra* as *mantras* are rhythmic repetition that produces certain types of energies ‘specifically designed to promote healing, insight and spiritual growth’ ‘*Mananth Trayathe Ilhi Mananth*’ (mantra protects the person who recites it) (Ferrand, 1997-2009). Any form of prayer practiced in any religion is usually written in poetic form because “verse creates transformation”. In ancient Egypt sacred words were chanted in ritual as a means to heal the diseased. One can reduce stress and obtain peace of mind through recitation of a *Gayatri Mantra*

Om Bhoor Bhuvah Svah

Tat Savitur varenyam

Bhargo Devasya Dheemahi

Dhiyo Yo Nah Prachodayat

According to the article entitled “The Bhagvad Gita Given to Prison inmates” by S.P. Saravan published in *The Hindu* dated 21 Dec 2011, “As many as 500 inmates of the Coimbatore Central Prison were presented with copies of the Bhagavad Gita with the help of International Society for Krishna Consciousness” (ISKCON) with the intention “of educating, enlightening and reforming the inmates.” The author feels that reading the book “will help the inmates in realizing the meaning of peace, forgiveness and love”. Saravan also mentions in this article that “Indian Jurisprudence believes in giving the prisoner a chance to reform” and thereby “the prison has a session for listening to Thirukkural couplets every day.” In addition, yoga and meditation are also taught to the prison inmates because “good thoughts and good deeds can help prisoners overcome their problems and stress.”

In “A Brief Overview of Poetry Therapy”, an article developed by NAPT, it is stated that the healing power of poetry goes back to ancient days. In the 1st Century AD, Soranius, a Roman physician, recommended tragic verse for his mental patients and comedy for the depressed. Apollo, the Greek God of light and the sun, is also recognized as a God of healing, music, and poetry. If we look into primitive history of healing we would find that ancient men used religious rites in the form of poetic chants for the well being of the tribesmen. In ancient Egypt, words were written on papyrus (a thick paper like material produced from the pith of the papyrus plant), and then “dissolved in a solution so that the words could be physically ingested by the patient” for fast relief (NAPT, 2004)

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Consider the magnificent extract from the great poet of the English Romantic period, Shelley:

*Make me thy lyre, even as the forest is:
What if my leaves are falling like it own!
The tumult of thy mighty harmonies
Will take from bath a deep, autumnal tone,
Sweet though in sweetness. Be thou, spirit fierce,
My spirit! Be thou me, impetuous one!
Drive my dead thoughts over the universe
Like withered leaves to quicken a new birth!
And by the incantation of this verse.
Scatter, as from an unextinguished hearth
Ashes and sparks my words among mankind
Be through my lips to, unawakened earth
The trumpet of a prophecy ! O wind
If winter comes can spring be far behind?*

—(Shelley's Ode To The West Wind)

These lines would not just diminish negativities of the mind like stress, tension irritation etc.; it would, infact, act like Shelley's west wind as a driving force for change and rejuvenation.

Poetry is the oldest and perhaps the most primitive form of literature. It is also the most refined and delicate of all the literary genres. Poetry is the song of man's heart and soul, the picture of man's senses and imagination. Right from the ancient Greek epic poems 'The Odyssey' and 'Illiad' of Homer to the imaginative, functional or autobiographical poems, to Shakespeare's masterpieces, "Macbeth" and "Othello" to the more recent ones- all these poetic renderings have been able to induce a change in the mind of the reader. Indeed poetry brings happiness, develops the spirit to overcome fear and confusion and uplifts the soul.

Stress is felt mostly when there is work in hand. Man works with an expectation of a reward or incentive. We study to get high marks; work to be paid and strive to achieve fame. This creates stress. A verse that is capable to teach us to function not only when rewarded can serve us in some way. The ancient Hindu Scriptures of Vedas and the Upanishads are 'thousand of lines of inspiration composed in verse' and considered by the British poet Martin Seymour Smith as one of the hundred most influential books ever written (Seymour-Smith, 1998). The Bhagwad Gita comprising of seven hundred verses via Sanskrit meter is a 'practical self contained guide to life'. Maharishi Mahesh Yogi describes it as a "lighthouse of eternal wisdom that has the ability to inspire any man or woman to supreme accomplishment and enlightenment". Every

Indian Hindu household will have either of the two, the Vedas or the Gita; or both. These books are sometimes recommended by the doctors to patients who are going through some kind of mental agony or confusion. They are for deriving wisdom and solace.

He who does work for Me he who looks upon Me as his goal, he who worships Me free from attachment, Who is free from enmity to all creatures, he goes to me, O Pandava".

—(*The Bhagwad Gita, Chapter 11 verse 55*)

Poetry can both 'teach and delight' and is a good medium for purifying wit. "The delightfulness of the poet's enunciation and the vividness of his 'speaking picture' are the source of his ability to move hearers or readers to virtue (Sidney, 1595). Anything that is didactic can be healing. Perhaps the best example of this type of poetry is Tagore's poetry. "The poetry of Tagore owes its sudden and universal success to the advantage that it gives us more of this discovery and fusion for which the mind of our age is in quest" (Sri Aurobindo). We can carry Gitanjali (a profoundly sensitive, fresh and beautiful verse) with us. It can delight us whenever we require it.

Where the mind is without fear and the head is held high

Where knowledge is free

Where the world has not been broken up into fragments

Where words come out from the depth of the truth

Where the clear stream of reason has not lost its way

Into the dreary desert sand of dead habit

Where the mind is led forward by thee

Into ever widening thought and action

Into that heaven of freedom . . .

Stress is felt the most at the workplace. Employees can take a break and read poetry. Herbert Benson, MD in his book "The Break-out Principle" wrote about his findings in the laboratory that if one concentrates on a single thought or scene, the human body produces nitric oxide which fights back any adrenaline produced through anxiety or stress. He recommends the employees to take a break and read something that would captivate them like poetry and 'receive their shorts of nitric oxide' (Benson, 2003).

Read Tagore:

Klanti amar khôma kôro probhu,

Pôthe jodi pichhie porî kobhu.

Ei je hîa thôro thôro kâpe aji êmontôro,

Ei bedona khôma kôro khôma kôro probhu.

Ei dinota khôma kôro probhu,

Pichhon-pane takai jodi kobhu.

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*Diner tape roudrojalae shukae mala pujar thalae,
Shei mlanota khôma kôro khôma kôro, probhu*

— [An excerpt from 'Fatigue', the sixth poem from 'Gitanjali' where the poet is praying the lord to pardon his fatigue.]

English Version

This Weariness forgive me oh my lord
If ever on my way I do fall back
This tremulous heart quivers today thus
This sorrow forgive oh forgive me oh lord
This wretchedness, forgive me oh my lord
If ever on my way look I do look back
In blistering heart of the fiery day
If withers my garland of prayer flowers
That listlessness, that forgive me oh my lord.

—Translated by Rumela Sengupta

It is interesting to note that "a soothing refrain to put a child to sleep" (the concise Oxford Dictionary, 1976) lullabies are recited to babies to put them to sleep. 'Lullaby' is a short rhyme found in all human cultures and has been used from the ancient period and it is not a coincidence that lullaby is a poem. A poem does have a soothing effect on human nerves. An eminent psychotherapist once said that 'poetry gets into us and plays through our psychoneuro immune system'.

In other forms of art the perceiver is less involved in the process of perceiving than a poetry reader. The poetry reader is more active while receiving the effects of this art form; he can read or hear lyrics aloud, grasp its imagery through his eyes and finally visualize it out in the layers of consciousness. The whole process involves the person. Poetry should be preferably read aloud breathing comfortably to allow the sense to emerge from the 'response of the rhythms and tonal variations of the sound as well as the meaning of the words', pronouncing each word with good diction.

We can try with this descriptive poem of Keats where the poet describes the season of autumn. These descriptive lines with their sensuous quality arouse our fantasy. Fantasy is a type of defense mechanism man uses to overcome stress. There is a "restorative benefit" in reading poems of nature.

*Season of mists and mellow fruitfulness,
Close bosom-friend of the maturing sun;
Conspiring with him how to load and bless
With fruit the vines that round the thatch-eaves run;
To bend with apples the moss'd cottage-trees,
And fill all fruit with ripeness to the core;*

To swell the gourd, and plump the hazel shells
 With a sweet kernel; to set budding more,
 And still more, later flowers for the bees,
 Until they think warm days will never cease,
 For Summer has o'er-brimm'd their clammy cells.

—To Autumn by John Keats

To quote Pratap Bandhopadhyaya from his writing "Philosophy of Moral Order in Sanskrit Literature" "The Sanskrit literary critics who rightly admitted aesthetic pleasure *rasa vada* as a main purpose of the literary art noted its educative purpose as well. They did not think that this would belittle the spirit of the art because they maintain the writer never taught like a master or even like a friend but like one's beloved". We learn moral values of Humility, Sincerity, Courage, Trust, Faith, Patience, Reverence, Justice, Integrity from lines of poetry -values that will make us fit to change the world through conviction and a morally uplifted person is usually less prone to stress, anxiety and depression.

Bipode more rokkha karo e nohe mor parthona
Bipode ami na jeno kori voy.
Dukkho tape bathito chitte nai ba dile santona
Dukkho jeno korite pari joy.
Sohay mor na jodi jute nijer bol na jeno tute
Sonsare te ghotile khoti, lovile sudhu banchona,
Nijer mone ne jeno kori khoy.
Amare tumi koribe tran e nohe mor parthona
Torite pari sokti jeno roy.
Amar var laghob kori nai ba dile santona
Bohite pari emoni jeno hoy.
Nomro sire sukher dine tomari mukh loibo chine
Dukher rate nikhil dhora je din kore bonchona
Tomare jeno na kori sonsoy.

—Rabindranath Tagore

English Version

I do not plead to be saved from danger
 In face of danger, may I not be afraid
 So be it if you soothe not my weebegone heart
 May I have the courage to conquer woe
 A support if I do not find,
 My strength not be worn out
 A loss if I bear, if deprivation is all I know,
 May I not be broken down

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I do not plead for deliverance
 May I have the strength to stay afloat
 So be it if you relieve not my load
 May I have the strength to carry on
 In days of peace and joy
 I will revere and realise you
 The night my world is torn asunder
 May I desist from doubting you



—Translated by Kamela Sengupta

Like other forms of psychotherapy this artistic medium with its creativity and beauty of words in verse can be an effective therapeutic tool to overcome stress. The therapy works by developing equilibrium between the right and the left hemisphere of the brain with the use of words, meaning, sound and rhythm. The journey across three layers of consciousness and finally opening the door to the inner or the Saraswat layer where man finds a sense of completeness, experiences *rasa* or *ananda*; which is permanent in nature moving the reader or spectator to a "temporary state of bliss" (Sharma, 2009)

In Indian aesthetics, scholars believe that this aesthetic experience of deriving *ananda* or pleasure followed by moral improvement is one of the purpose of *kavya* or poetry known to be *sadyah paranirvrtaye*. This aesthetic experience is beyond worldly pleasures and acts as a "rasa" or healer to one who is tired, unhappy and bereaved, or in this case, stressed. In the words of Prof Sharma "A poetic composition is *manas vyapara* (business of the mind) and the *sah* (reader/spectator) is moved by poetic portrayals in a manner or depth as seldom characterized in life's practical experiences. It is this speciality of the poetic culture that absorbs and overwhelms the mind or inner self of the reader for the time being. He might become forgetful, as well of all the exterior objects or concerns of life. This is the state of *satvodereka* (*internal luminosity*) in which the mind experiences the aesthetic pleasure".

The evil effects of stress can be easily reduced by poetry. A piece of poem is accessible, pleasant to read, has no side effects and has got the greatest "power to evoke imagination, emotion and inspiration". Reading poetry will help us develop accuracy, creativity, adaptability, self esteem, communication skill, it will reduce tension factors that enhance productivity and find meaning in life. No wonder why Freud remarked "[P]oets are masters of us ordinary men in knowledge of the mind, because they drink at streams which we have not yet made accessible to science"

To end with Milton's sonnet, one of my favorites, where the poet being blind is unable to use his talent but asserts:

God doth not need

Either man's work or his own gifts: who best

Bear his mild yoke, they serve him best. His state
Is kingly; thousands at his bidding speed
And post o'er land and ocean without rest:
They also serve who only stand and wait.

—On His Blindness (John Milton)

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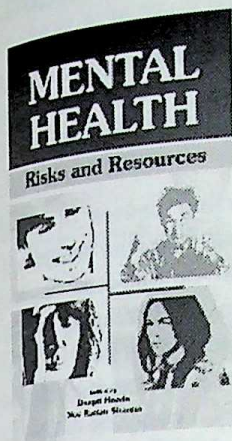
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BOOKS ON PSYCHOLOGY



Mental Health: *Risks and Resources*

Edited by

Deepti Hooda and Nov Rattan Sharma

2013, ISBN: 978-81-8220-582-6

Rs 1200/-

Health is the most precious treasure and every one wishes to possess it in his/her life. There may be many major domains of Health e.g. physical, mental, social etc. however, all of the domains are significant but mental health is the most important. There is no health without mental health. Mental health is the undercurrent of all health

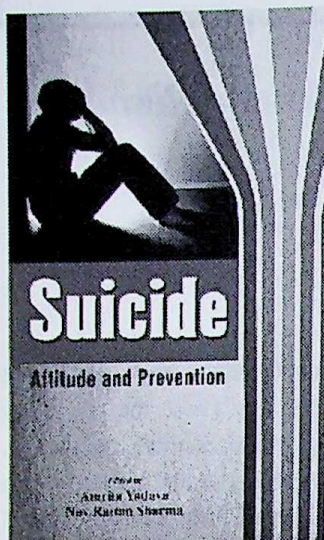
domains. It is the power house and distribute strength reaching every health domain to build holistic health of an individual, but on the other hand if mental health is disturbed, it may adversely affect not only other health domains but create unhealthy behavioral patterns resulting day to day problems. Around the globe, mental health challenges are increasing day by day irrespective of age, gender and other socio-cultural parameters, whereas, mental health services particularly in India, are not satisfactory, more so, clinical model of mental health is not cost effective. Therefore, there is a strong need to work upon the promotive and enhancement model. A Psychologist has to undertake this pious duty of collection and disseminating of knowledge on mental health education.

Present volume, "Mental Health: Risk and Resources" is an effort in this direction. Major objective of this edited book is to find out ways and means to check and analyses the details of mental health from a theoretical as well as empirical angles. There are fifteen chapters in this book which take up important issues ranging from determinants, correlates and therapeutic techniques pertaining to mental health. Editors hope that the assimilation of knowledge to understand and evaluate the mental health processes in this book will achieve its objective of reaching to masses and common readers.

Deepti Hooda is a young psychologist engaged actively in teaching and research at Department of Psychology, M. D. University, Rohtak, since last more than seven years. Presently, she is conducting further researches in Positive Health Psychology and so far around 15 articles have been contributed by her in different journals and edited books. Recently, she has published an important volume on 'Biopsychosocial issues in Positive Health'.

Nov Rattan Sharma is working as professor of Psychology at M. D. University, Rohtak. With a teaching and research experience of 30 years, Professor Sharma has contributed around 100 research articles to various Journals and books of International repute. He is also an editor of a prestigious periodical i.e. Journal of Indian Health Psychology.

Journal of Indian Health Psychology



Suicide: Attitude and Prevention

Edited by

Amrita Yadava and Nov Rattan Sharma

2013, ISBN: 978-81-8220-583-3

Rs 950/-

Suicide is one of the leading causes of death throughout the world. Suicide behavior means self-destructive behaviors with fatal or non-fatal results. Strikingly, the number of victims is increasing almost in every age range groups irrespective of poor or rich. Review of literature and historical exploration highlights that suicide ideation is caused by a complex cluster of factors. It is really a cry for help to trace an escape from unbearable pain of physical or psychological

nature. There is a strong need to understand the principal reasons for each suicide acts of attempters as well as completers, so that, behavioral and psychological risk factors are identified for the vulnerable population. Identifications of general or specific risk factors will further help in generating general or specific resources for suicide prevention.

Present book is an assertive effort to compile such researches and references that enable common man to understand the meaning of suicide; kinds and methods of suicide acts; role of family in suicide; significance of miseries and sorrows; myths and facts about suicide; role of emotionality in suicide ideation; share of risks and protective factors in suicide behavior; theory of planned behavior and others to predict suicide; stress and resilience balance in suicide acts, life skill programs in dealing with suicide tendencies workable intervention procedures for suicide prevention and methods to antagonize/negate suicide ideations or intentions. There are total fifteen chapters contributed by famous social scientists of the field. Every chapter is a significant masterpiece in its own way. Editors hope that researches and resources highlighted in the book will prepare a sufficient background in helping to deal with the suicide rates in an effective manner.

Amrita Yadava is presently working as Professor of Psychology at M. D. University, Rohtak. Professor Yadava is extensively engaged in teaching; research and application work in Psychology since last more than 30 years. Her primary area of teaching is experimental and cognitive Psychology whereas research areas are of much applied nature. She has published more than 75 research articles in various reputed national and International journals. She, being the Director of Women Studies Center at M. D. University, Rohtak has initiated many programs targeting female adolescents' problems, needs and remedies.

Nov Rattan Sharma is working as professor of Psychology at M. D. University, Rohtak. With a teaching and research experience of 30 years, Professor Sharma has contributed around 100 research articles to various Journals and books of International repute. He is also an editor of a prestigious periodical i.e. Journal of Indian Health Psychology.

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EDITORIAL

The Journal of Indian Health Psychology (JIHP) aims to publish interdisciplinary researches that generate knowledge on health issues and their solutions with special focus on Indian data. Present issue includes eleven research articles and two book reviews.

First article contributed by A.P. Singh and Nitu Singh explored the role of locus of control as a moderator between the relationship of negative life events stress and general health. Authors have reported that locus of control moderated the relationship between negative stress events related to job and general health. The second article assessed and compared the family burden among the parents of children with mental retardation and healthy children. Parents of children with mental retardation showed significant higher level of burden than healthy control group. Therefore, authors have tried to shift the focus of mental health professionals to mental health issues of care givers along with that of individuals with MR. The next article enlisted in the current issue studied Psychological distress among people living with HIV/AIDS and highlights the need for social and cognitive skills training to patients to facilitate them in handling their distress by rational thinking, worry control and planned positive living in addition to the medical intervention.

Kamlesh Singh, Jasleen Kaur, Dalbir Singh and Shradha Suri examined the relationship between different Well-being and Interpersonal (altruism, gratitude, forgiveness, avoidance motivation and revenge motivation) and Intrapersonal factors (self-esteem, resilience, and self-management) among rural women. The next article explored the relationship between Coping behaviour, Psychosocial stressors and Life satisfaction among army personnel of officer ranks and other ranks. Mansavee Dubey and G. S. Gujar identified the Psychological Predictors of Mental Health government and private school teachers. They have reported Emotional Intelligence as a significant positive predictor whereas Presumptive Life Stress was a significant negative predictor of dimensions of Mental Health. Samyak Makwana compared Self-concept of students who participate in Sport with non-participating Students. Author observed students who participated in sports had better physical and social self-concept than non-participating group.

Vandana Singh and Pramthesh Pandey studied blame attribution and severity of punishment in the case of sexual molestation of women. The finding of this research emphasis the need to design intervention directed at reducing cases of eve teasing and sexual molestation and can also help in developing reform policies. The next article by O. P. Sharma, S. Bhardwas and H. Tiwari reported that type of Pranayama and regularity of practice have significant effect on Positive Self-evaluation dimension of General Mental Health. Anis Ahmad and Gauri Shankar Singh conducted the research to assess and understand the relationship between Life satisfaction and Mental health of aged male and female of North Bihar. InduBala and Amrita Yadava have empirically demonstrated that intra-individual variability (IIV) in RT does not appear to be a very good index whereas visual complex RT is a good index of neuropsychological dysfunctioning.

Editors are grateful to all the investigators/authors, referees and book reviewers for their valuable inputs. We seek the feedback from their readers in order to further enrich the journal.

Editors

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ROLE OF LOCUS OF CONTROL AS A MODERATOR BETWEEN THE RELATIONSHIP OF NEGATIVE LIFE EVENT STRESS AND GENERAL HEALTH OF MANAGERIAL PERSONNEL

A.P. Singh * and Nitu Singh**

ABSTRACT

This paper is an attempt to find out the role of locus of control as a moderator between the relationship of negative life events stress and general health. With the growth of science, technology and materialistic predominance, individual's concern for health has increased. The present study was conducted on 210 managerial personnel of different private sector organizations in India. The moderator regression analysis indicated that locus of control moderated the relationship between job negative and general health. This study may help managers and human resource development practitioners to understand negative life events stress and the importance of personal control in order to maintain their health to work efficiently in organizations.

Keywords: Stress, Locus of Control, Emotional wellbeing and General Health

INTRODUCTION

People use the word "stress" to describe a wide variety of situations – from your cell phone ringing while you're talking on another phone – to the feelings associated with intense work overload, or the death of a loved-one. The changing world of work and its implications, as well as the demand on organisations for better performance and competitiveness is taking its toll on the emotional wellbeing

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of employees. Being mentally and emotionally healthy does not preclude the experiences of life which we cannot control. As humans we are going to face emotions and events that are a part of life. According to Smith and Segal (2011), "People who are emotionally and mentally healthy have the tools for coping with difficult situations and maintaining a positive outlook in which they also remain focused, flexible, and creative in bad times as well as good". In order to improve one's emotional mental health, the root of the issue has to be resolved.

Stress is a condition or feeling experienced when a person perceives that "demands exceed the personal and social resources the individual is able to mobilize." In less formal terms, we feel stressed when we feel that "things are out of control." Our ability to cope with the demands upon us is the key to our experience of stress. For example, starting a new job might be a wholly exciting experience if everything else in your life is stable and positive. But if you start a new job when you've just moved into a new house, or your partner is ill, or you're experiencing money problems, you might find it very hard to cope. All individuals in the course of living, experience a variety of stressful life events, which might include such diverse events as death of one's spouse, separation or divorce, addition to the family, illness of a family member and transfer to an undesirable location. These events are stressful because they often require significant social readjustments and adaptations.

Stressful life events can affect the individual's working in the organization. Holmes and Rahe (1970) have concluded that many illnesses can be precipitated by the stress accompanying changes negative and positive in one's life. Extra organizational stressors interact between life outside and life inside the organization which might put pressures on managers. Life stress refers to the psychological response state of disturbed affect in relation to stressors in one's life as a whole (Parasuram, Greenhaus & Granrose, 1992). Exposure to chronic stressors (such as relationship and family problems, financial stress and job strain) in addition to negative life events has also been linked with psychological distress or disorder, including depression. Environmental demands includes acute life events, chronic strains and daily hassles, all of which can elicit a stress response, suggesting that it is not just dramatic events but also the events of daily life that can exact a toll on health (Thoits 1995). Numerous studies have shown that exposure to intense and ostensibly stressful life events is associated with higher level of psychological problems including psychological distress, psychiatric disorders, substance abuse and suicide (Dohrenwend 2000; Turner and Lloyd 1999).

The concept of locus of control was first proposed by Rotter (1954), which originally it was locus of control of reinforcement. Locus of control is defined as the general belief that individual's successes, failures and outcomes are control by individual's actions and behaviours (internal); or perhaps, people's achievements,

Role of Locus of Control as a Moderator between the Relationship...

failures and outcomes are controlled by other forces like chance, luck and fate (external) (Spector, 1988). Many studies have been done to explain the locus of control in both aspects internal and external control; in fact, control is an important factor for well-being (Meier, Semmer, Elfering, & Jacobshagen, 2008). So, locus of control is divided into internal and external control.

Internal locus of control refers to people who believe that outcomes and their successes and failures are the result of their own actions and efforts (Rotter, 1966). It can be defined as the events and outcomes which can be influenced by people's own beliefs and actions (Ng, Sorensen, & Eby, 2006). Similarly, individuals with internal locus of control believe that they are able to control and manage their own lives by making decisions about the events (James & Wright, 1993). Additionally, Hsu (2011) found that individuals with high internal locus of control accept that their achievements and failures depend on their own efforts and endeavours or briefly they have ability to determine their own outcomes and they are responsible for what happened.

External locus of control refers to the beliefs that chance, fate, managers, supervisors, organizations and other persons are more powerful to make decision about individual's lives and outcomes (Rotter, 1966). Indeed people with perceived external locus of control believe that fate, chance, and luck, friends, and managers determine the outcomes which they themselves experience; so, they contribute their successes, failures and outcomes to external sources (James & Wright, 1993). Hsu (2011) proposed that people with external locus of control believe that external elements such as luck, chance and destiny are stronger to determine their lives, and their failures or successes are not due to their own efforts.

In humans, it is the general condition of a person's mind and body, usually meaning to be free from illness, injury or pain (as in "good health" or "healthy"). The World Health Organization defines mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community". It was previously stated that there was no one "official" definition of mental health. Cultural differences, subjective assessments, and competing professional theories all affect how "mental health" is defined. Mental health can be seen as an unstable continuum, where an individual's mental health may have many different possible values.

Mental wellness is generally viewed as a positive attribute, such that a person can reach enhanced levels of mental health, even if the person does not have any diagnosed mental health condition. This definition of mental health highlights emotional well-being, the capacity to live a full and creative life, and the flexibility to deal with life's inevitable challenges. Many therapeutic systems and self-help books offer methods and philosophies espousing strategies and techniques vaunted

as effective for further improving the mental wellness of otherwise healthy people. Positive psychology is increasingly prominent in mental health.

A mental health problem can be a short term reaction to stressor (such as a loss, painful event, illness, medication, etc.). If situation does not abate or if symptoms of distress are interfering with other aspects of life, assistance from a mental health professional may be needed. We do not generally avoid getting help for physical problem (such as having broken bone set by an orthopaedist, or a cavity filled by a dentist). Yet some believe it is shameful to seek help for an emotional health problem, or think that an emotional problem means you are "crazy". In many situations, the sooner help is sought; the less ongoing difficulty here will be the problem.

Health is one of the many areas in which there has been a significant amount of interest in relating locus of control (LOC) beliefs to a variety of relevant behaviours. There is initial evidence of the relationship between Locus of Control and health related behaviours. Health-specific Locus of Control beliefs will increase understanding of health behaviours. (Wallston & Wallston, 1978).

Research into job stress and its relationship to locus of control support the existence of a relationship. (Eves. et.al., 2000, Spector & O'Connell, 1994). All these studies found that externals seem not only to have higher perceived level of stress than internals but also appear to be more negatively affected. The literature concerning research on the relationship between locus of control and health facilitating behaviours as a whole, point towards internal locus of control as a mediating factor of actions taken to prevent health problems. (Lefcourt & Davidson-Katz, 1991, Carlisle Frank, 1991). Another research shows a predictive relationship between what has been called "life stress" "emotional stress" and "object loss" and the onset of both psychological disturbances and physical illness (Dohrenwend & Dohrenwend, 1974; Gunderson & Rahe, 1974).

There is growing empirical evidence that exposure to stress and resulting stress reactions are linked with a variety of deleterious health effects (Dohrenwend 2000; Kelly, Hertzman, & Daniels 1997). Increased levels of stress and negative life events posited to be important not only as determinants of health, but also as mechanisms by which socioeconomic inequalities in physical (Baum, Garofalo, & Yali 1999) and mental (Turner, & Avison 2003) health are produced.

Although stressful life events are associated with psychological symptoms in adults and children, research indicates that life stress accounts for a small percentage of the variance in predicting the onset of psychological symptoms (Goodman, Gravitt, & Kaslow, 1995). Moreover, many individuals who experience high levels of negative life stress do not become disturbed (Kaplan, Sallis, & Patterson, 1993). In light of the significant but low relationship between stress and symptoms, researchers have shifted their focus to the search for psychosocial

Role of Locus of Control as a Moderator between the Relationship...

mediators and moderators of this association, such as social support (Cohen & Wills, 1985; Nadia & Rene, 1996), coping skills (Windle & Windle, 1996), cognitive appraisal processes (Lazarus & Folkman, 1984), social problem solving (Goodman et al., 1995), and locus of control (Kliwer & Sandler, 1992;). In general terms, a moderator affects the nature and magnitude of relations between life stress and psychological symptoms. Locus of control is the personal characteristic that has shown the most consistent evidence of a stress-moderating effect in studies (Cauce, Hannan, & Sargeant, 1992; Luthar, 1991).

Objective

The purpose of the present study was to examine locus of control as a moderator between negative life event stress and general health of managerial personnel.

Hypothesis

From the literature and empirical studies concerning the role of negative life event stress, and general health, the following hypothesis is proposed:

1. Locus of control would moderate the relationship between negative life event stress and general health.

METHOD

Sample

Present investigation was conducted on 210 managerial personnel (top, middle and front) of different private sector organization in India. Participants age varied between 22 to 59 years.

Design

In the present investigation we have used a correlational design with ex-post facto research. Negative life events stress and Locus of control were taken as predictor variable while General Health was considered as criterion variable.

Tools

The following psychometric devices along with personal data schedule which recorded the information regarding age, sex, marital level were employed.

1. *Life Changes Experiences Survey* (Dohrenwend et al., 1978): Stress (life events) was measured by using Life Changes Experiences Survey. This questionnaire has been frequently used in studies to measure life event stress. Internal consistency reliabilities (Cronbach's Alpha) of different sub scales were found to be 0.53 for job positive stress, 0.73 for positive personal life stress, and 0.77 for total positive life stress. High score on this scale shows high level of life events stress.

2. *Social Reaction Inventory (Rotter, 1966)*: Locus of control was assessed by using Social Reaction Inventory. This Inventory was developed to measure person's internal external locus of control by Rotter (1966) and based upon his identification of the construct which deals with a person's perception of contingency relationship between his own behaviour and events which follow that behaviour. The inventory consists of 23 question pairs, using a forced choice format, plus six filler questions. Internal statements are paired with external statements. Internal consistency coefficient (Kuder-Richardson) of this inventory was found to be 0.70 (Rotter, 1966). For discriminant validity, Rotter has reported that correlation with the Marlowe-Crowne social desirability scale range from -0.70 to -0.35. High score on this scale shows external locus of control and low score shows internal locus of control.
3. *General Health Questionnaire-12 version (Goldberg, 1972)*: This scale was developed by Goldberg, (1972) to measure the health status of individual. In this scale, items are rated on the basis of relationship of perceived health in present and last two weeks before. Split-half reliability of this scale was found to be 0.83. This scale was developed to screen out the psychiatric patient from general population. In present study this questionnaire was used to assess the level of general health of managerial personnel. High score on this scale shows good health.

Procedure

For conducting the present study, all the necessary permission for data collection was taken from the organizations, selected for the study. Rapport was established with the employees and the purpose of the study was explained to them. The questionnaire was distributed to 210 managers who were contacted personally and requested to respond on the above mentioned measures. They were asked to read carefully the instructions given in the questionnaires. Participants were allowed to take their own time to complete the questionnaire. All above mentioned psychometric devices were simultaneously administered to the selected participants. Scoring for all the above mentioned questionnaires were done accordingly as instructed in their manuals.

Data Analysis

The obtained raw scores on different scales were entered in computer. To study locus of control as a moderator between the relationship of negative life event stress and general health, moderator regression analysis was computed.

RESULTS AND DISCUSSION

In this paper, results have been computed in terms of moderated regression analysis by using SPSS. The scores for analysis were obtained on the basis of

response of managers on standardized measures- Life Changes Experience Survey, Social Reaction Inventory, and General Health Questionnaire-12 version.

Table 1: Summary of the results of Moderated Regression analysis for locus of control as a moderator between the relationship of job negative and general health

Model	R	R.Sq	Adjusted R	R.sq Change	F	Sig.
Job Negative(job neg)	0.133	0.018	0.013	0.018	3.754	0.054
Locus of control(LOC)	0.171	0.029	0.020	0.011	3.106	0.047
Job neg x LOC	0.206	0.042	0.029	0.013	3.046	0.030*

*Significant at 0.05 level

Table-1 records the result of Locus of control as moderator in the relationship between job negative and general health. Results indicate that locus of control is found to be the significant important moderator between the relationship of job negative and general health.

A number of studies have identified several factors that act as moderator against the deleterious effects of stress. These studies indicate that some personality characteristics may prevent work related tension from becoming stress-related health problems. Locus of control as a personality trait has shown the most consistent evidence of stress moderating effect (Cohen & Edwards, 1989; Kliewer & Sandler, 1992; Bono & Judge, 2003). Thus, various theoretical and empirical researches have provided the base for the present study which attempted to investigate the role of locus of control as a moderator in the relationship between negative life event stress and general health of managerial personnel.

The results of the present study revealed that Locus of control was found to be the significant moderator in the relationship between job negative and general health, which supports our proposed hypothesis.

Extreme stressors can create both acute and prolonged psychological distress and bodily ailments. As per an Insurance Company report (1992), problems at work are more strongly associated with health complaints than are any other life stressor- more than even financial problems or family problems. Rise in negative job events like problems or arguments with supervisor or colleagues, harassment, discrimination, work load, conflict between job demands etc can take a toll on health. Therefore, Locus of control may act as a buffer which is likely to alleviate the impact of negative job events on the general health of managers.

The findings of the present study throw light on the importance of individual differences. A situation which may be stressful for one person may not be so to

others. This is so because, the severity of stress depends on the individual's sense of control in dealing with them, as it shapes an individual's perception of what are the main causes of events in life. Locus of control has a close relationship with one's self-worth. So, locus of control may predispose one to have an ongoing evaluation of self-worth, which may allow people to adjust their perceptions of control in life that in turn relate to how one approaches situations. Thus, locus of control serves as a protective function by affecting appraisals of stressful situation, coping efforts or both.

Previous researches reported that individuals with high on internal locus of control are more powerful to overcome stress and its negative impacts. This is so because individuals with high internal locus of control can determine the outcomes of actions by their own decision making (Owen, 2006). Therefore, a person with high locus of control (internal) may view the situation to be controllable, predictable and thus would engage more actively and vigorously in coping with work stress, and manage to remain healthy.

Hence, it can be concluded that employees should increase their sense of control by making balance between the determined demands and their capabilities at workplace so as to prevent stress, which in turn may help in reducing its impact on health.

It is well known that stress is the cause of many psychological and physiological diseases, so employers have to make an effort to reduce the stress which is felt by the employees in the organizations. The result of the present study can motivate organizations to explore personality variables present in the managers that can help reduce and/or prevent stress observed by them in the workplace, thereby working to maintain the health and wellbeing. The present study can help in the stress management workshops too. The results indicate the necessity of employing counsellors in the organization. This service may help the employees deal and solve their personal problems, increase their locus of control which in turn may help them cope with the upcoming job demands.

Locus of control and negative life events stress has important influence on the general health of the employees working in the organizations. In future there is a need to study other personality variables which may help in reducing influence of stress on the general health. The present study was carried out only on the managers but there is also the need to include employees from different levels of an organization as samples. The levels of perceived work stress and work adjustment between internals and externals can also be explored. This study could only cover the private sector organizations but in future a comparative study between private and public sector organization can also be done.

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STUDY OF BURDEN IN PARENTS OF CHILDREN WITH MENTAL RETARDATION

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ABSTRACT

Current research findings have indicated that diagnosis of mental retardation in a child is commonly experienced as having a devastating effect on parent's lives. Parents or care-givers are definitely the heart of the family; who not only has to deal with the issues associated with child's disability but also has to maintain the household. To date, a number of studies have demonstrated that caregivers are more vulnerable to develop mental and physical problems as compare to non-caregivers. The present study assessed and compared the family burden among the parents of children with mental retardation and healthy controls. Family Burden Interview Schedule was administered on 50 parents of children diagnosed with mental retardation (Department of Psychiatry) and 50 parents of healthy controls (Dental department) P.G.I.M.S. Rohtak . Statistical analysis was done using SPSS- 16.0. The results revealed a high prevalence of burden in study group. Further in comparison, a significant difference was found between study group and healthy control group. Study group showed significant higher level of burden than healthy control group. Therefore, it is very important that mental health professionals to take care for these populations as individuals.

Keywords: Mental Retardation, Disability, Care-givers, and Family burden.

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INTRODUCTION

Mental Retardation (MR) is defined as a disability characterized by remarkably low intellectual functioning ($IQ < 70$) in conjunction with significant limitations in adaptive functioning (American Association on Mental retardation, 2002). Worldwide prevalence of mental retardation is reported to be as high as 2.3% (Franklin & Mansuy, 2011), and in India it is reported to be around 2% for mild mental retardation and 0.5% for severe mental retardation (defined as IQ less than 50) (Srinath & Girimaji, 1999). In National Sample Survey of 2004, 94 people per 100,000 were found to be mentally retarded (National Sample Survey Organization, 2004). A series of factors are identified that can cause mental retardation but even though in at least 30 to 50 percent of cases, physicians are unable to determine etiology despite thorough evaluation (Armatas, 2009).

The fact that in addition to the core symptoms, children and adolescents with Intellectual disability often display a number of co-morbid behavioural problems, makes the situation more complex (Dykens, 2000; Einfeld, Piccinini, Mackinnon, 2006). Many researchers have concluded that the incidence of mental illness in persons with mental retardation is highest for persons classified as mildly or moderately mentally retarded (Jacobson, 1982; Iverson, & Fox, 1989). The liability associated with rearing such mentally handicapped children usually affects whole of atmosphere of home including routine family life, emotional aspects and financial resources of family (Kaur & Arora, 2010). Hence, for a parent, providing the high level of care required by a child with mental retardation may become taxing and may impact both physical and psychological health of caregivers.

Caregiver burden is defined as "a multidimensional response to physical, psychological, emotional, social and financial stressors usually associated with the experience of caring" (Kasuya, Polgar-Bailey, Takeuchi, 2000). Burden of care has two components namely subjective and objective burden (Hoeing & Hamilton, 1966). Objective burden includes measurable effects such as economic burden, caregivers' loss of work, social and leisure activities, household disruptions such as child care, restrictions on relationships within and outside the family etc. Subjective burden is mainly the psychological sufferings of the caregivers themselves and is experienced by them such as depression, hatred, uncertainty, guilt, shame, embarrassment etc (Ravindranadan & Raju, 2007). Irrespective of the level of mental retardation; it is for sure that caregivers have to cope with their special needs and therefore disability in children are not only problem for affected children, but in real sense they are 'family disease' (Witt, Riley, Coiro, 2003). This seems more germane in our country where family bears the main burden of caring for such persons unlike in the developed world. Experts explain that in India families assume the role of primary caregivers for numbers of reasons (i) the Indian tradition of interdependence and concern for near and dear ones in

adversities and (ii) there is a paucity of trained mental health professionals required to cater to the vast majority of the population; hence, the clinicians depend on the family" (Avasthi, 2010).

There is no doubt that mental retardation (MR) is a life-long disability with has a major impact on the lives of the children and their families. While raising a child with chronic condition, parents experience psychological stress and disappointment when their child does not meet their hopes and expectations (Barnett, Clements, Kaplan-Estrin, Fialka, 2003). Caring for those who are MR is often itself stressful as care-giving affects several aspects of caregiver's life negatively including poor physical and emotional state (Pinquart & Sörensen, 2003; Vitaliano, Zhang, & Scalan, 2003). Caregivers experience depression, burden, less social support, and less coping resources than non-caregivers (Vitaliano et al., 2002). As a general agreement, mental retardation can impose psychological problems, social issues, and lifestyle restrictions that can affect quality of life of the caregivers and family members, who also bear the considerable indirect costs of patients' disability. But this is only one side of the coin; there are examples where act of caregiving is found to be associated with experiencing subjective gains and satisfaction (Kulhara, Kate, Grover, Nehra, 2012). Researchers concluded that as youth's symptoms improved, caregivers' symptoms might also benefit from reduced stress associated with a symptomatic child (Silverman, Kurtines, Jaccard, & Pina, 2009; Carrion, Kletter, Weems, Berry, Rettger, 2013). Its strong impact, make it of extreme importance to investigate its mechanisms and find new avenues towards its potential prevention and treatment for caregivers. It can be assumed that the negative consequences of burden on caregivers may harm their care giving effectiveness, whereas experiencing subjective gains and satisfaction may enhance their caregiving ability. Hence present study is planned to assess the degree of perceived burden among the parents of children diagnosed with mental retardation and to compare them with normal controls in Indian setting.

METHOD

Sample

The data was collected from 50 parents of children diagnosed with mental retardation and 50 parents of healthy controls. The place of the data collection was the Department of Psychiatry and Dental Department P.G.I.M.S. Rohtak

Inclusion Criteria

- The parents who were living with the child with mental retardation (I.Q. below 70)
- The parents who were living with healthy children
- Age of child below 15 years
- Either parent of the child (preferably mother).

Exclusion Criteria

- Any psychiatric illness in parents in both groups.

Tools Used

The following tools were used for the present study:

- **Socio-demographic Performa:** A special Performa designed for this study was used to gather socio-demographic details about the subjects.
- **Family burden interview schedule:** Family Burden Interview schedule developed by Pai and Kapur, 1981 was used to assess family burden.

This scale measures objective aspects of burden and it contains six general categories of burden, each having two to six individual items for further investigation. Subcategories include: Financial burden, Effects on family routine, Effects on family leisure, Effects on family interaction, Effects on physical health of family members and Effects on mental health of other family members.

Procedure

Total of 100 parents of children was assessed. 50 parents were recruited from the Dept. of Psychiatry and who had child diagnosed with mental retardation. Another 50 parents of healthy children were recruited from the Dental Department. Subjects fulfilling the inclusion criteria were selected for the study. A written informed consent was taken from them and the objectives and the procedures of the study were explained in detail.

RESULTS AND DISCUSSION

The study is exploratory in nature so the suitable statistical package for social science (SPSS: version 16.0) was used.

TABLE 1: Socio-demographic details of the study and control group

Variable	Item	Study group	Control group	
			(N=50) N (%)	(N=50) N (%)
Age	Mean± SD		34±7	30.92±3
Gender	Male		8 (16%)	—
	Female		42(84%)	50(100%)
Residence	Urban		45(90%)	28(56%)
	Rural		5(10%)	22(44%)
Marital status	Married		50(100%)	50(100%)
Occupation	Unemployed		7(14%)	1(2%)
	Housewife		40(80%)	43(86%)
	Salaried		2(4%)	5(10%)
	Business\self employment		1(2%)	1(2%)
Religion	Hindu		49(98%)	49(98%)
	Sikh		1(2%)	1(2%)

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Education	Illiterate	20(40%)	1(2%)
	< Secondary	22(44%)	28(56%)
	> Secondary	8(16%)	21(42%)
Family type	Joint	20(40%)	27(54%)
	Nuclear	30(60%)	23(46%)

Table 2: Significance of Mean Difference in Study Group and Control Group on family burden scale

Variables	Study Group (N=50) (Mean \pm SD)	Control group (N=50) (Mean \pm SD)	T
Financial burden	6.74 \pm 1.68	0.68 \pm .51	24.290
Financial burden	6.74 \pm 1.68	0.68 \pm .51	24.290*
Disruption of Routine family Activity	2.48 \pm .88	0.30 \pm .46	15.418*
Effect on Physical health of others	2.42 \pm .94	0.58 \pm .49	12.132*
Effect on mental health of others	7.80 \pm 1.86	0.10 \pm .30	28.852*
Disruption of family leisure	7.86 \pm 1.88	0.14 \pm .35	28.478*
Disruption of family Interaction	2.56 \pm 1.12	0.22 \pm .41	13.755*
Subjective burden	4.88 \pm 1.27	0.16 \pm .37	25.193*
Total	31.80 \pm 6.46	2.18 \pm 1.24	31.802*

*p < .01

Mental health professionals are the front line for treating team but role of caregivers cannot be ignored who continuously engaged in informal care of the sufferer. This informal care is the unpaid provision of care to a dependent person by family members or friends, has been considered the backbone of any long-term care system (Colombo, Llena-Nozal, Mercier, & Tjadens, 2011). A caregiver provides physical and psychological support for a family member or friend, beyond what is typical of their relationship (Bridges, 1995). This has now been demonstrated that family members face financial problems, difficulty enjoying leisure activities, and various degree of distress while trying to understand the behaviour of patients living at home (Chieko, Shinji, Tomoko, Ryoji, Yasuo Fujii, Fumio, Toshinori 2002). It is well established that high degree of burden is associated with female, old age, low educational level, without employment and who are taking care of younger patients (Caqueourizar et al, 2006). The purpose of the present study was to compare Family burden in parents of children with mental retardation (MR) and healthy controls. With a movement away from the institutional care and towards the home based care of persons with MR, it is the family that bears the brunt in caring for their disabled relative (Farber, 1959). A combination of factors appears to predict the likelihood of burden experienced

by the caregiver. In present study parents in study group perceived high level of burden. This is corroborating with the findings of another study (Sethi, Bhargava, Dhiman, 2007). More specifically, mothers of children with MR displayed lower physical health, impairment in social relationships, in their psychological state and poorer perception of their environment. These findings are in accordance with previous studies, reporting parents of children with MR, particularly mothers, experience more burden than parents of typically developing children (Upadhyaya & Havalappanavar, 2008). When compared with normal controls, the experimental group experienced higher level of burden and the level of burden increased as the severity of MR increased. These findings are in keeping with those by the earlier investigators (Girolametto & Tannock, 1994). The possible reasons for this could be that a mothers spent more time with the children while caring for them; most mothers were home-makers without additional help and also were restricted to home with no time or provision for leisure activity (Beckman, 1983).

Involving caregivers in treatment may improve their attitude toward patients with psychiatric problem and, in doing so, enhance patients' adherence and outcome (Sher, McGinn, Sirey, Meyers, 2005). Caregiving is generally considered as a cumbersome and difficult work. Although many families show a strong resilience in caring for an ill relative, their share of physical and emotional distress cannot be ignored (Swaroop, et al., 2013). It seems quite obvious that excessive burden negatively impact the caregiving process. Hence, family caregivers who provide care to other family members also need supervision or assistance in illness or disability (Medical Condition Dictionary, 2011). Present findings also highlight the importance of self-care for caregiver. Therefore, we advocate various tips suggested by experts that should be given to the care givers to balance their critically important care giving role with their own health and wellbeing (Sahoo, Brahma, Mohapatra, 2010).

CONCLUSION

Growing evidence suggests that care giving to these children leads burden to the caregivers that are the reason that prevailing stress or burden is reported by these individuals. Understanding how to manage the negative consequences of caregiving is critical to developing and implementing realistic, appropriate response strategies. There is no doubt that psychological evaluation and intervention programs should be considered as vital adjuncts to the management of MR; particularly among inaccessible segments of the population. The present findings have practical implications for assessing the health needs of caregivers who are taking responsibilities of a child with mental retardation or intellectual disability. In our country where we have limited resources and it is high time that we should realize that we may not develop holistic health of the patient if the caregivers are overburdened. So treatment providers should also shift their

focus to the mental health of care givers too along with that of individuals with MR. Having health caregivers can maximize the chances of MRs successful resettlement in society; it will be associated with increased met needs.

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PSYCHOLOGICAL DISTRESS AMONG PEOPLE LIVING WITH HIV/AIDS

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ABSTRACT

The present study used GHQ-12 to assess psychological distress of a small sample of people living with HIV/AIDS (PLHA) drawn from two low prevalence States of India. Respondents' GHQ scores were variously analyzed to explore gender differences in psychological distress. The data from the present study were then compared with secondary data obtained from two other published studies to examine extent of psychological distress in various clinical and nonclinical groups. Together these analyses revealed that female PLHA experience greater overall psychological distress than male PLHA, male PLHA are more distressed on account of their inability of handling problems of daily living while female PLHA are more distressed because of worrying, and that PLHA as a group experience considerably greater distress than either cancer patients, patients in palliative care, unemployed males and females and also school leavers. The present study highlights how in addition to the medical intervention there is also an intense urgent need for social and cognitive skills training to PLHA to facilitate them in handling their distress by rational thinking, worry control and planned positive living.

Keywords: Cognitive skills training, Medical intervention, Psychological distress, Emotional state, and People living with HIV

INTRODUCTION

Psychological distress can be defined as "the unique discomforting, emotional state experienced by an individual in response to a specific stressor or demand that results in harm, either temporary or permanent, to the person" (Ridner, 2004).

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Psychological distress is viewed as an emotional condition that involves negative views of the self, others and the environment and is characterized by unpleasant subjective states such as feeling tense, worried, worthless and irritable (Barlow and Durand, 2005). It is often used as an indicator of general health.

Not much published literature is available throwing light on the subjective health perceptions, psychological distress, and psychiatric morbidity of people living with various chronic illnesses such as HIV/AIDS and cancer. Chronic illnesses such as these are not only life threatening (Wasti et al., 2011; Mühlbacher et al., 2013), but also require adherence to lifelong medication (Vallabhaneni et al., 2012; Abassa et al., 2008; Wools-Kaloustian et al., 2009), frequent hospitalization (Scandlyn, 2000), and attract substantial stigma and discrimination (Nyblade et al., 2009; Kinsler, 2007) besides coping with adverse mental health consequences of AIDS-related bereavement (Hansen et al., 2009). Persons living with chronic illnesses have to thus not only negotiate their own illness and the related complications, they also have to endure expected and experienced stigma from others, sometimes even from their own caregivers (Dieleman et al., 2007; Uebel et al., 2007; Nyblade, 2009).

The psycho-social scenario surrounding HIV/AIDS could be much worse as there seems much more stigma and discrimination, allegations, gossip and character assassination for persons infected and affected by HIV/AIDS than there is for cancer or other chronic illnesses. If such a person happens to be a female the story becomes all the more tragic in view of a female's physical, psychological, financial dependence, (Esplen, 2007), powerlessness (Seesay, 2010), low social status (Lippitt, 2008) and therefore poor access to health services (Becker & Newsom, 2003) in many traditional societies like that of India.

Against such a background, the present study has been designed to focus on the psychological distress among people living with HIV/AIDS (PLHA). The study also attempted to identify areas of specific difficulty in PLHA's subjective health perceptions. Then, by utilizing secondary data from other sources, the present study went on to compare psychological distress of people living with HIV/AIDS (PLHA) with three other groups - people living with Cancer (PLWC), people in palliative care, and those representing the general community.

METHOD

Sample

A small nonprobability sample of 54 people (26 males and 28 females) living with HIV/AIDS from the low prevalence states of Uttar Pradesh and Uttarakhand were included in the present study. The inclusion criteria were that the respondents have HIV sero-positive status and were taking Anti retroviral therapy (ART) from designated ART centers by National AIDS Control Organization (NACO) under the Ministry of Health, India. Sample characteristics were as follows: all

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respondents were married; their age ranged from 30 years to 45 years; their education ranged from class VIII to graduation; and their income per month ranged from 'no income' to Rs. 10,000.00.

Tools

Following tools were used in the present study:

1. *General Health Questionnaire (GHQ-12)*: Psychological distress was assessed in the present study using the 12 items version of the General Health Questionnaire (GHQ-12). The GHQ-12 is a widely used and validated instrument designed to screen for psychological distress (Goldberg & Williams, 1998). Each item in the GHQ-12 assesses the severity of distress over the past few weeks and uses a four point rating scale from 'less than usual', 'no more than usual', 'rather than more usual', to 'much more than usual'. The GHQ-12 gives a total score of 12 or 36 depending on the scoring method selected. The most common scoring methods are binary (0-0-1-1) and Likert (0-1-2-3). Half of the GHQ-12 items (1,3,4,7,8,12) are negatively worded yet response categories are so formatted that these items do not require reverse scoring. A higher total score on GHQ-12 indicates greater psychological distress and hence poorer health and vice versa.

Procedure

Respondents were contacted at the Community Care Centers (CCCs) and the District Level Networks (DLNs). Community Care Centers (CCCs) are places where HIV infected people stay for five days when they start taking ART medicines for the first time. This is required so that medicine is administered under supervision, the clients get attuned to medications, its side effects if any can be managed immediately and psychosocial support and counseling is made available as per the clients' needs. District Level Networks (DLNs) are places where legal assistance, opportunities for rehabilitation and peer support are made available to people living with HIV/AIDS. Several visits were made to the CCCs and the DLNs to get familiarized about the psycho-social working conditions of these places, their record keeping, daily schedules of the PLHA, time of the day when the PLHA were likely to be relatively less occupied, etc. During these visits, preliminary discussions were held with the PLHA for ice breaking activities and also checking their eligibility for inclusion in the present sample.

After the PLHA were sampled, the purpose of the study was explained to them, rapport was build, and written informed consents were obtained from them. Face-to-face personal interviews in an easy and slow paced manner supplemented with GHQ-12 were conducted with individual respondents. Usable completed questionnaires could be obtained from 28 female and 26 male PLHA. Response rate was 69.23 %.

In the present study, the binary method (0-0-1-1) of scoring GHQ-12 was used to assess psychological distress among people living with HIV/AIDS (PLHA). The Likert method (0-1-2-3) of scoring GHQ-12 was used to examine percentages of male vs. female PLHA falling into various categories of severity of psychological distress, to identify major areas of psychological distress for male and female PLHA and to compare psychological distress of the present sample of PLHA with the secondary data obtained from elsewhere about cancer out-patients, people in palliative care and those from the general community.

RESULTS AND DISCUSSION

In Table 1 are presented percentage of HIV infected males, females and total sample saying 'yes' to the various GHQ items. Column 1 in this Table presents the 12 GHQ items. Six of these 12 items - #1,3,4,7,8 and 12 - are positively worded and are shown here in bold for easy differentiation. A comparison of cell values in columns 2 and 3 offers insights about major gender related differences in health perceptions by the present sample of people living with HIV/AIDS or PLHA while column 4 presents health perceptions of the total sample of PLHA. The mean GHQ score of PLHA (n=54) was 27.18.

Table 1: Percentage* of respondents saying 'Yes' to each of the 12 GHQ items

S. No.	1 GHQ- 12 Items	2 Male PLHA N=26	3 Female PLHA N=28	4 All PLHA
1	Been able to concentrate on what you are doing	50	25	37.04
2	Lost much sleep over worry	46.15	71.43	59.26
3	Felt you were playing a useful part in things.	57.69	39.29	48.15
4	Felt capable of making decisions about things.	57.69	25	40.74
5	Felt constantly under strain.	53.85	60.71	57.41
6	Felt you could not overcome your difficulties.	53.85	46.43	50
7	Been able to enjoy your normal day-to-day activities.	61.54	75	68.52
8	Been able to face up to your problems.	57.69	53.57	55.56
9	Been feeling unhappy and depressed.	65.38	50	57.41
10	Been losing confidence in yourself.	53.85	39.29	46.3
11	Been thinking of yourself as a worthless person.	50	32.14	40.74
12	Been feeling reasonably happy, all things considered.	53.85	53.57	53.7

*Binary method was used for calculating %

On five out of the six positively worded items percentage of female PLHA reporting agreement is smaller than that of the male PLHA. Fewer females than males agree that recently they have been able to concentrate on and enjoy whatever they were doing, played a useful part in things, felt capable of making decisions, faced up to their problems, and felt reasonably happy all things considered. On two out of the six negatively worded items (2 and 5) much greater percentage of female PLHA showed agreement. Cell entries in column 4 suggest that psychological distress in the total sample of PLHA mainly consists of worry (item

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2), strain (item 5), difficulties (items 6), unhappiness (item 9) and depression (item 9).

After analyzing gender related differences in PLHA's responses to individual GHQ items, an attempt was next made to re-analyze GHQ scores to assess differences in percentage of the male and the female PLHA that could be categorized as showing low to severe psychological distress. The objective of this analysis was to obtain additional information on gender differences in psychological distress among the PLHA. Goldberg *et al.* (1997) have earlier shown that in the Likert scoring method a score of 1-10 indicates 'low psychological distress'; 11-12 is 'typical'; 13-15 is 'more than typical'; 16-20 shows 'evidence of psychological distress'; and scores over 20 indicate 'severe distress'. The results obtained using Goldberg's categorizations suggest that among male PLHA 73% show severe distress, 19% show more than typical distress, 4% each show clear evidence of psychological distress and typical distress and none fall in the category of low psychological distress. Fig 2 referring to female PLHA, in contrast, presents an extreme picture. It clearly demonstrates that all of the female PLHA sampled in the present study score above 20 and hence can be categorized as showing severe distress.

Goldberg (1978) had earlier indicated that in the binary method of scoring GHQ a score of 2 or more is indicative of psychological distress. An attempt was therefore made to compute percentages of the present sample of male and female PLHA who endorsed 2-9 of the 12 GHQ items. These percentages are presented below in Table 2. The analysis indicated that 34.59 % of the male PLHA report experiencing 2-9 of the problems while the same % for female PLHA is 74.98. This further lends credence to the argument that most PLHA experience considerable psychological distress and that this scenario is particularly worse in the context of female PLHA.

Table 2: Percentage of PLHA endorsing a 2-9 of the 12 GHQ items

No. of GHQ Items endorsed	Males n=26	Female n=28	Total n=54
09 Items	11.53	7.14	9.26
08 Items	7.69	7.14	7.40
07 Items	7.69	0.00	3.70
06 Items	3.84	25.00	14.81
05 Items	0	17.85	9.25
04 Items	0	10.71	5.55
03 Items	0	3.57	1.85
02 Items	3.84	17.85	11.11
% endorsing 2-9 items	34.59	74.98	62.93

An attempt was next made to assess area wise psychological distress among the male and the female PLHA. For this an intuitive pulling out of thematically important areas from the GHQ was undertaken-somewhat akin to doing factor analysis that statistically yields 'principle' components. This is a novel way of analysis that has never been attempted before in spite of the fact that GHQ has been in popular circulation for over more than two decades. A content analysis of the 12 GHQ items revealed that these are woven around six principle affect areas. For each of these six areas there is one negatively worded item and one positively worded item. For example items #1 and 7 refer to 'Daily Activities', 2 and 5 to 'Worry/Strain', 3 and 11 to 'Worthlessness', 4 and 10 to 'Incapability of Decision Making', 9 and 12 to feeling 'Unhappy/Depressed' and 6 and 8 to 'Inability to handle problems'. The 12 items were paired as shown above to yield six areas of psychological distress. Thereafter for each respondent area wise scores were calculated. A respondent's score in each area could range from 0-2 as scores across two items per area were summated. These are presented in Table 3.

This analysis indicated that male PLHA experienced greatest psychological distress regarding 'inability to handle problem' (#6) while for the female PLHA the greatest psychological distress resulted from 'worrying' (#2). The three other areas where in considerable psychological distress was experienced by both male and female PLHA alike were 'not being able to enjoy daily activities' (#1), feeling 'worthless' (#3), and 'unhappy/depressed' (#5). The main advantage of this analysis accrued in showing that much of the psychological distress in people living with HIV/AIDS is caused because of their dysfunctional cognitions (feeling worthless, unhappy, depressed, and not enjoying, etc.) rather than because of some real adverse situational event.

Table 3: Area wise psychological distress (two GHQ items per area)*

<i>Distress Areas</i>	<i>GHQ item no.</i>	<i>Male' Scores</i>	<i>Female' Scores</i>	<i>Scores for the Total Sample</i>
1. Not Enjoying Daily Activities	1,7	1.11	1.00	1.05
2. Worry	2,5	1.00	1.32	1.16
3. Worthlessness	3,11	1.07	0.71	0.88
4. Incapability of Decision Making	4,10	1.11	0.64	0.87
5. Unhappy/Depressed	9,12	1.11	1.00	1.05
6. Inability to handle problems	6,8	1.19	1.03	1.11

*Binary method was used for analyzing area wise distress.

Thus the four analyses reported above with respect to the individual GHQ items, categorization of respondents on the basis of severity of psychological distress as suggested by Goldberg, % of male and female PLHA endorsing 2-9

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of the 12 GHQ items and area wise assessment of psychological distress showed that female PLHA not only experience considerably more psychological distress in comparison to the male PLHA, the content of this distress too varies. While worrying majorly causes female PLHA's psychological distress, the same for male PLHA results from their inability to handle problems of daily living among other things.

After assessing and confirming gender differences in psychological distress, an attempt is next made to compare psychological distress of people living with HIV/AIDS with that of people living with cancer, in palliative care, and from the general community. For this, data from two previous studies by Gao *et al.* (2010) and Bank *et al.* (1980) are utilized. Comparing the mean of the present PLHA (n=54) sample, *i.e.* 27.18 was much more than Bank *et al.* (1980) sample of employed male and female varying from 8.53 to 9.71 and those of unemployed male and female from 13.84 to 15.61. Gao *et al.* (2010) reported mean GHQ score of cancer out patients (n=200) as comparing general community (n=364) as 10.6 and that of having palliative care (n=150) equal to 16.8 those being quiet small than present PLHA (n=54) with mean GHQ of 27.18.

In the present study GHQ scores of people living with HIV/AIDS were variously analyzed to explore gender differences in psychological distress among them. The data from the present study were then compared with secondary data obtained from two other studies to examine extent of psychological distress in various clinical and nonclinical groups. Together these analyses revealed that female PLHA experience greater psychological distress than male PLHA and also that PLHA experience considerably greater distress than either cancer patients, patients in palliative care, unemployed males and females and also school leavers. The present study thus clearly suggests that in addition to the medical intervention there is also an intense urgent need for psychological intervention and social skills training to PLHA to help them acquire skills for rational thinking, worry control, re-organizing their social networks, obtaining greater social support, finding workable solutions to problems of daily living and moving on with their positive living.

High stress does not necessarily accompany HIV infection. Stress among people living with HIV/AIDS may well be a joint function of various social, attitudinal, financial factors. In a study of South African patients living with HIV/AIDS, hypertension, diabetes, and both hypertension and diabetes Kagee (2010) failed to find any significant difference in emotional distress perhaps because of the high prevalence of HIV in South Africa. Where as in a study of 575 African Americans living with HIV in the United States Shacham, Basta, and Reece (2008) found that nearly 20% of the sample reported significantly higher levels of both somatization and paranoid ideation than the normative sample. In the Indian society perhaps because of the close-knit nature of neighborhood and communities,

illiteracy, poverty, lack of infrastructure, insensitivity toward alternative sexualities, stigma and a lack of awareness about HIV transmission and management, the social scenario surrounding the HIV infected and the affected individuals is far from satisfactory. There are therefore hordes of people with high-risk behaviours who do not come forth for testing, and of HIV+ individuals who resist status disclosure, drop out from needed linkages and become lost to medical care and support. Intense social psychological intervention therefore seems crucial for both prevention of the infection and also for reduction of psychological distress later on.

General health and wellbeing among people living with HIV/AIDS or PLHA is one of the major concerns of the public health program across globe. In India, the National AIDS Control organization (NACO) makes a lot of efforts by way of designing and implementing the national program towards ensuring the same among PLHA. The program provides services for treatment care and support and counseling through Antiretroviral Therapy (ART), Community care center (CCC) positive networks, Integrated Counseling and Testing Centers, etc. Yet, to effectively tackle the complicated intricate issue of HIV/AIDS in the humongous Indian population, a coming together of various stakeholders is also extremely needed to push multidisciplinary efforts for addressing health related concerns of the HIV infected and affected individuals.

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CORRELATES OF WELL-BEING: A RURAL WOMEN STUDY

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and *Shradha Suri*****

ABSTRACT

The study attempts to explore the correlation between different types of well-being (psychological, subjective and social) and interpersonal (altruism, gratitude, forgiveness, avoidance motivation and revenge motivation) and intrapersonal factors (self-esteem, resilience, and self-management). A total of 194 rural women with a mean age of 39.61 years (SD= 15.48 years) participated in the study. A quantitative schedule consisting of number of questions pertaining to all the constructs mentioned above was prepared in the Hindi language. Findings reported significant correlation of various factors with psychological well-being, (PWB), subjective well-being (SWB) and social well-being (Social WB). Avoidance motivation was the only factor which did not show correlation with well-being.

Keywords: Psychological well-being; Subjective well-being, and Interpersonal and intrapersonal factors

INTRODUCTION

Well-being is deconstructed as subjective well-being and psychological well-being. Subjective well-being is perceived as balance between positive and negative emotions and global life satisfaction whereas psychological well-being is defined as "engagement with existential challenges of life" (Diener, Suh, Lucas and Smith,

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1999; Keyes, Shmotkin & Ryff, 2002). Psychological well-being consists of six dimensions namely; positive relations with other, self-acceptance, purpose in life, autonomy, environmental mastery and personal growth (Ryff, 1989). However, Keyes (1998) highlighted the importance of the third dimension of well-being that is social well-being. This dimension was proposed on the premises that individuals are embedded in social structures and communities and hence would determine their quality of life.

Women are often visualized as "agents of change and development" in the society thus, generating empirical interest of researchers to explore the area of women's well-being. Women in rural areas fulfill dual responsibilities of household work and working outside house. The dual role enhances stress and lowers well-being level. The Commission on the Status of Women, UN (2012) reported that rural women work for about 16-18 hours per day. They engage themselves in various activities such as field work, animal husbandry and household chores. The different stressors that affect well-being are fewer employment opportunities, economic uncertainty of farming, fatigue, emotional and social isolation (Chikani, Reding, Gunderson & McCarty, 2005; Frase, Smith, & Judd et al., 2005) and reinforcement of traditional gender roles (Bushy, 1998).

Eberhardt, Ingram, & Makuc, (2001) observed that women experienced higher level of mental distress than men regardless of their place of residence (rural or urban). A higher percent of depressed women were noticed in rural areas (Probst, Laditka, & Moore et al., 2006), thus highlighting their lower well-being. However, Harvey (2007) reported that in rural settings, despite the dearth of health care facilities, transportation, educational facilities and stringent social and environmental roles, rural women possess positive and better overall health across the lifespan. In another study, rural women identified various facilitators of well-being like fulfillment of all basic needs, socialization, healthy interpersonal relationships, friendly environment, involvement in religious activities whereas, several well-being inhibitors like lack of social support, physical painful disease, joblessness of male member/s in the family, inactive lifestyle of today's era leading to diseases, individualistic trend prevailing in society especially younger generation these days and reducing trustworthiness and rising crime in the society, Singh, Kaur and Singh (in press). The current research aims to correlated well-being with interpersonal and intrapersonal dimensions.

Several interpersonal and intrapersonal factors are known to promote well-being such as social support (Ryan & LaGuardia, 2000), relationships (Reis & Gable, 2003), religiosity (Christopher, 2000), gratitude (Froh, Sefick & Emmons, 2007), self-esteem (Zimmerman, 2000), social relationships (Argyle, 2001). Lyubomirsky, King, & Diener, 2005); resilience (Souri & Hasanirad, 2011). However, there are certain interpersonal factors which are also known to negatively affect well-being. Interpersonal transgressions (defined as a class of interpersonal stressors in which people perceive that another person has harmed them in a

way that they consider both painful and morally wrong) can have negative effects on mental health (Cullough, Root & Cohen, 2006). For example, thoughts of revenge are among the strongest elicitors of anger (DiGiuseppe & Froh, 2002), and entertaining one's grudges and thoughts of revenge lead to cardiovascular and sympathetic nervous system arousal (Witvliet, Ludwig, & Vander Laan, 2001).

The Current Study

In India, 48.6% of the women reside in the rural areas. Therefore, it was deemed important to explore the well-being of these women, who are often neglected in research. The current study is a part of a larger study that was conducted to explore the well-being of rural women. Mixed methodology was employed in this well-being project. However, it was observed that the participants found it difficult to comprehend the Likert type scale rating. Hence, the scale dimensions were changed to "yes, no and undecided" for the present research. However, most of the items were borrowed from standardized tools. Misra (1990) indicated that rural and urban India constitute of two independent subsystems. Therefore the same methodology and tools cannot be used. It is hard to understand the rural population by applying the principles and parameters that were obtained from urban samples. Moreover, research question (Misra & Paranjpe, 2012) and participants' nature should concur on relevant research methodology. To understand well-being of rural women, it was considered essential to modify the scales and a new list of items on various factors of interest was constructed.

Objectives

The present study looked at the correlation between different models of well-being (PWB, SWB, and Social WB) and interpersonal (altruism, gratitude, forgiveness, avoidance motivation and revenge motivation) and intrapersonal (self-esteem, resilience, and self-management) factors.

METHOD

Sample

The sample consisted of 194 rural women with mean age of 39.61 years ($SD = 15.48$). Out of the 194 women who submitted the information on demographic aspects; 45.9% of the women had attained education up to 10th standard, 10.3% studied up to 11-12th grade and 13.4% reported to be graduates. However, 22.2% were found to be illiterate and 8.2% did not report their educational qualification. Furthermore, 92.3% (179 women) of these were reported to be married with 3.6% widowed and 9.3% did not report their marital status.

Tool Construction

A quantitative questionnaire schedule was prepared by the authors. Since the study aimed to explore the correlation of well-being with different interpersonal

and intrapersonal factors, various relevant standardized tests - items were taken in this study. The first step involved in identifying items that appeared as simplest to comprehend from different standardized psychometric tools of interest. The second step involved translating the items into Hindi. Two bilingual experts translated the English language to Hindi language independently. The scale was back translated to ensure that no item was altered and meaning was retained. The authors and bilingual experts validated the tool. The scale was scored as Yes=1; Undecided=2 & No=3. The test consisted of 53 items measuring well-being, interpersonal and intrapersonal constructs. (Appendix-1).

Procedure

The women were approached individually. Rapport was established with the women before administration of the test. A brief overview of the study was given. For the participants who were illiterate, the authors verbally took responses for each of the item. The participants who were able to read and write filled their own questionnaire were informed about the confidentiality of responses and consent for participation was taken. The participants' verbal or written consent was taken.

RESULTS AND DISCUSSION

The data was analysed using SPSS version 15.0. Correlational analysis was employed between well-being (PWB, SWB and social WB), interpersonal (altruism, gratitude, forgiveness, avoidance and revenge) and intrapersonal factors (resilience, self-esteem and self-management) (see table-1).

Well-Being constructs significantly correlated with each other. SWB correlated positively with PWB ($r=0.41$, $p<0.01$), life satisfaction correlated with PWB ($r=0.54$, $p<0.01$) and SWB ($r=0.66$, $p<0.01$), positive affect was correlated with PWB ($r=0.45$, $p<0.01$), SWB ($r=0.53$, $p<0.01$) and LS ($r=0.68$, $p<0.01$), negative affect was negatively correlated with all the other well being constructs namely; PWB ($r=-0.22$, $p<0.01$), SWB ($r=-0.23$, $p<0.01$), LS ($r=-0.22$, $p<0.01$) and PA ($r=-0.20$, $p<0.01$). Social well-being correlated with PWB ($r=0.26$, $p<0.01$), SWB ($r=0.22$, $p<0.01$), LS ($r=0.32$, $p<0.01$) and PA ($r=0.35$, $p<0.01$). The inter-correlations between the different well-being constructs are in tune with the earlier researches. Linely, Malthby, Wood, Osborne, & Hurling (2009) demonstrated through confirmatory factor analysis that both the models of well-being are highly correlated. Similarly Kashdan, Biswas-Diener and King (2008) too proposed that SWB and PWB were closely associated than previously believed and further added that SWB may be a prerequisite of PWB. This finding was also indicated by King, Hicks, Krull and Del Gaiso (2006) who demonstrated that by inducing positive affect, participants reported higher level of meaning in life. Similarly the current study also indicates that psychological well-being, subjective happiness and social well-being were all interrelated.

Table 1: Correlation between well-being, interpersonal and intrapersonal factors

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. PWB	1													
2. SWB	.41**	1												
3. LS	.54**	.66**	1											
4. PA	.45**	.53**	.68**	1										
5. NA	-.22**	-.23**	-.22**	-.20**	1									
6. Social WB	.26**	.22**	.32**	.35**	-.11	1								
7. Altruism	.30**	.37**	.35**	.40**	-.08	.37**	1							
8. Gratitude	.13	.17*	.12	.16*	-.00	.08	.23**	1						
9. Forgiveness	.13	.16*	.14	.14	.04	.20**	.15*	.05	1					
10. Avoidance M.-00		.10	.08	-.06	-.02	.05	-.02	.10	-.14	1				
11. Revenge M.	-.02	.15*	.10	.03	.15*	.02	-.01	.04	-.13	.64**	1			
12. Self esteem	.24**	.30**	.32**	.57**	-.10	.23**	.32**	.20**	.08	-.11	-.02	1		
13. Resilience	.16*	.25**	.28**	.22**	-.20**	.20**	.26**	.08	.07	.13	.07	.12	1	
14. Self M	.19**	-.06	.01	.09	-.16*	.07	.02	.02	-.01	-.21**	-.20**	.15*	.06	1

Note: N= 194, ** p<0.01 & *p< 0.05 significance level. PWB=psychological well-being, SWB=subjective happiness, LS=Life satisfaction, PA=positive affect, NA=negative affect, Social WB=social well-being, avoidance M= avoidance motivation, revenge M=revenge motivation, Self M= self management.

The **interpersonal** constructs were related to well-being. Altruism was significantly correlated with PWB ($r=.30$, $p<.001$), life satisfaction ($r=.35$, $p<.01$), and PA ($r=.16$, $p<.05$). Midlarsky and Kahana (1994) opined that adult altruism was associated with improved morale, self-esteem, positive affect, and well-being. Significant association was reported between altruistic activities with well-being constructs such as positive affect and life satisfaction (Kahana, Bhatta & Lovegreen et al., 2013; Morrow-Howell, Hinterlonh, Rozario, & Tang, 2003).

Gratitude was significantly correlated with SWB ($r=.17$, $p<.05$), positive affect ($r=.16$, $p<.05$) and altruism ($r=.23$, $p<.01$). In some studies, gratitude was positively correlated to subjective well-being (Peterson & Seligman, 2004). Gratitude on a daily basis enhances positive affect and other measures of well-being (Froh, Kashdan, Ozimkowski & Miller, 2009; Sheldon & Lyubomirsky, 2006). A significant positive correlation was also found between gratitude and forgiveness.

Significant correlation ($r=.20$, $p<.01$) was seen between forgiveness and social well-being. Toussaint and Friedman (2008) reported relationship between forgiveness, gratitude and well-being. They discussed that forgiveness and gratitude are positive psychological characteristics which are positively related to well-being and facilitated by affect and belief.

Revenge motivation was significantly positively correlated with NA ($r=.15$, $p<.05$). McCullough, Root and Cohen (2006) reported negative affect of interpersonal transgressions on mental health. Brown (2003) reported that people who tend to feel vengeful or unforgiving after transgressions are prone to depressive symptoms. The two transgressional motivations namely; revenge and avoidance were also highly correlated ($r=.64$, $p<.01$).

The **intrapersonal** constructs correlated with well-being. Self-esteem was significantly positively correlated with PWB ($r=.24$, $p<.01$), life satisfaction ($r=.32$, $p<.01$), PA ($r=.57$, $p<.01$) and social well-being ($r=.23$, $p<.01$). Self-esteem was found to have a direct relationship with life satisfactions (Grandey & Cropanzano, 1999). Ryff (1989) stated that happiness and self-esteem are parallel terms which are used as an index of global happiness or psychological well-being. Self-esteem and altruism were also found correlated ($r=.32$, $p<.01$) in the present study. Enhanced self-esteem among other findings was reported for retired altruistic adults (Midlarsky & Kahana, 1994).

Significant positive correlation was seen for resilience with PWB ($r=.16$, $p<.05$), life satisfaction ($r=.28$, $p<.01$), PA ($r=.22$, $p<.01$), social well-being ($r=.20$, $p<.01$), and altruism ($r=.26$, $p<.01$) whereas significant negative correlation was found with NA ($r=.20$, $p<.01$). PWB was reported to be influenced by resilience (Souri & Hasanirad, 2011). Many studies (Block & Kremen, 1996; Klohn, 1996; Wolin & Wolin, 1993) confirmed high positive emotionality

in resilient individuals. Resilient individuals use positive emotions to achieve effective coping outcomes (Masten, 2001; Werner & Smith, 1992; Wolin & Wolin, 1993), creative exploration (Cohler, 1987), relaxation (Anthony, 1987), and optimistic thinking (Masten & Reed, 2002). Well-being facilitates the outcomes associated with resilience (Burns, Anstey & Windsor, 2010).

The construct, self-management showed significant positive correlation with PWB ($r=.19$, $p<0.01$) and a significant negative correlation with NA ($r=-0.16$, $p<0.05$). This indicates that individuals who are able to manage themselves are likely to possess positive feelings in life. This is because an individual would be at peace with oneself.

Overall findings of the present study, aligning with existing research confirmed intrapersonal and interpersonal factors as correlates of well-being. However, future research may focus on causal relationship by using stringent research methodology or qualitative research to get deeper insight in this area.

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APPENDIX-1
Description of the Tools Used in the Study

Domains	Sample items	Items From	Items	Item Number
WB	Psychological Well-being: Personal growth- "I am happy with my achievements." Self-acceptance- "I like my behaviour/personality" Environmental mastery- "There exists opportunity for new experiences and gaining knowledge." SWLS, (Diener, Emmons, Larsen & Griffins, 1985) Purpose in life- "I understand my life's meaning." Autonomy- "I am free to live on my own terms" Positive Relations- "Maintaining close relationships has been difficult and frustrating for me".	Ryff's Scale of Psychological Well-being (Ryff and Keyes, 1995)	7-Jan 8*	T= 8 Items P= 7 Items N= 1 Item
INTRA.	Self-esteem "I take a positive attitude towards myself," "I live my life with self-respect," "I believe in myself." Subjective Happiness: "Usually, I am happy in my life." "I am happy when I compare myself with my colleague." Life Satisfaction "I am completely satisfied in my life" and "I am satisfied with my living style." Positive Affect (PA): (used as statement not adjectives) "I feel joyful." "I feel energetic in my life." Negative Affect (NA): "I usually feel tensed and anxious." "I feel lonely." "I have headaches because of stress and tension."	Self Esteem Scale, Rosenberg (1965) (SHS), Lyubomirsky & Lepper (1999) SWLS, (Diener, Emmons, Larsen & Griffins, 1985) PANAS, (Watson, Clark, & Tellegen, 1988) PANAS, (Watson, Clark, & Tellegen, 1988)	30, 31, 20 15, 16 17, 18 19, 23 21, 22, 24 25, 27 & 28	T= 3 Items P= 3 Items T= 2 Items P= 2 Items T= 2 Items P= 2 Items T= 2 Items P= 2 Items T= 6 Items P= 6 Items

WB	Social Well-Being: "There are people in my life who really care about me." "The World is a good place to stay." "I feel close to other people in the society."	Social Well-being (Keyes, 1988)	9, 10, 11 12*, 13, 14, 26	T= 7 Items P= 6 Items N= 1 Items
INTR.	Resilience: "I learn from my mistakes and forget about them." "I am always optimistic about my future." "When things go wrong in my life, it generally takes me a long time to get back to normal."	(CD-RISC). Connor & Davidson, (2003) & Self Developed	46, 48, 49, 29, 32, 33*	T= 6 Items P= 5 Items N= 1 Items
INTR.	Altruism includes healthy relations with others and helping others: "I have a good relationship with my family members", "I always put myself in others shoes." "Every month, I donate some money."	Self developed	34, 35, 36, 38, 39, 40, 41	T= 7 Items P= 7 Items
INTR.	Gratitude: "I am thankful to a lot of people in my life." "I have a lot to thank for in my life."	(GQ-6), McCullough, Emmons, and Tsans (2001)	42, 43	T= 2 Items P= 2 Items
INTR.	Forgiveness: "However, some people have hurt me but I have forgiven them."	Self Developed	47	T= 1 Items P= 1 Items
INTR.	Self-management "I understand and manage my emotions very well." "If something goes wrong, I keep cursing myself for it."	Self Developed	37, 45*	T= 2 Items P= 1 Items N= 1 Items
INTER.	Avoidance: "I try to keep distance from the people who hurt me." "I withdraw from the people who hurt me."	TRIM -12) (McCullough, et.al. (1998)	50, 53	T= 2 Items P= 2 Items
INTER.	Revenge: "I punish the people who hurt me." "I am going to get even." "I like to see people who hurt me, in suffering."	TRIM -12) (McCullough, et.al. (1998)	44, 51, 52	T= 3 Items P= 3 Items

Note: WB= Well-being, Intra=Intrapersonal factor, Inter=Interpersonal factors; T=total, P=positive & N=negative items; *Negative Items (Reversed scored).

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COPING BEHAVIOUR AMONG ARMY PERSONNEL

Shivalika Sharma, Anup Sud** and Gayatri Raina****

ABSTRACT

The present study examines the coping behaviour among army personnel of officer ranks and other ranks for psychosocial stressors and life satisfaction. The sample comprised of 150 army personnel (75 officers ranks and 75 other ranks). The correlation analysis on all the variables has been done. The analysis revealed that for army personnel of officer ranks overall coping behaviour, problem focused coping and emotion focused coping have been found to be significantly and negatively related to psychosocial stressor of strained interpersonal relationships only. Overall coping behaviour and emotion focused coping have been found to be significantly and positively related to life satisfaction for army personnel of officer ranks. In army personnel of other ranks overall coping behaviour, problem focused and emotion focused coping have been found to be significantly and positively related to life satisfaction.

Keywords: Coping behaviour, Emotion focused coping, Interpersonal relationships, Problem focused, and Psychological stressor

INTRODUCTION

Coping consists of the cognitions and behaviour that people use to assess and reduce stress and to moderate the tension that accompanies it (Billings, Cronkites, & Moos, 1983). It follows that the relationship between coping and stressful event represents a dynamic process. Coping is a series of transactions between a person who has a set of resources, and particular environment with its own resources, demands and constraints (Lazarus & Launier, 1987). Thus, according to Taylor (2006), coping is a dynamic process and not an onetime

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action that an individual takes. It is a set of responses, occurring over a period of time, by which environment and person influence each other. A stressful circumstance can be rendered considerably less stressful if you know how to cope with it (Blonna, 2005; Corbin and others, 2006; Greenberg, 2006). According to Santrock (2006), coping involves managing taxing circumstances, expanding effort to solve life's adaptational outcomes.

People using problem focused coping try to deal with the causes of their problem, by finding out information on the problem and learning new skills to manage the problem. Problem focused coping is aimed at changing or eliminating the source of the stress. Emotion focused coping on the other hand involves releasing pent-up emotions, distracting oneself, managing hostile feelings, mediating or using systematic relaxation procedures. Emotion focused coping 'is oriented toward managing the emotions that accompany the perception of stress' (Brannon, 2009).

Psychosocial stressors refer to acute or chronic events of psychological or social origin which challenge the homeostatic states of biological systems. Psychosocial stressors include, but are not limited to, exposure to adverse environments and life experiences such as natural disasters, crowding or isolation, relative position in a social hierarchy, stigma and discrimination, catastrophic/traumatic events (e.g. war and terrorism), loss of job, disease, family violence, deprivation, adverse social environment or situations.

Psychosocial stressors involve stressors from interpersonal relationships, arguments or conflicts with family members, neighbors, friends, employee or other people around us. If experience with family and friends are supportive and constructive, the individual who is exposed to stress will be able to react favourably to stressors, while the individual who has primarily negative and non supportive experiences will find stressors to be more disruptive and upsetting.

Research studies have reported that just living in a military environment can be overwhelming as it impinges on an individual's overall functioning and test human limits (Cotton, 2001 & Moore, 2006). In Indian army, unfortunately occupation related stress and associated hazards are increasing day by day. Various statistical surveys show that the prevalence of stress among army personnel has been causing harmful impact on the society, the warning that cannot be ignored. Every third day a soldier commits suicide and every tenth day another is killed by a colleague running in mental illness, resulting in suicide and killing of fellow soldiers have caused an alarm among the army force (Tribune News, 2007).

Researchers have expressed that stress is a part of human life from which no human being can escape (Cooper & Dewe, 2004; Jones & Bright, 2001; Steptoe, 2000; Wong, 2006). Experience of stress varies among individuals and is inevitable at sometime or other in one's life (Lazarus & Cohen, 1977; Taylor, 2006).

Having effective coping mechanisms may be one of the important predictors of life satisfaction across the life span. Life satisfaction is an attribute of persons' evaluations of social support, health, own thoughts and feelings and methods of dealing or coping with stress.

Life satisfaction was positively correlated with greater use of cognition self-control coping and negatively correlated with maladaptive escapism and solace seeking (Lewinsohn, Render & Seeley, 1991). Perception of control and future orientation (Dubey & Agarwal, 2004), using planning and reinterpretation of situation may be an important way to improve life satisfaction (Lewinshon et al, 1991).

Kampfe, Mitchell, Bayless & Saucess (1995) observed a significantly more use of problem focused and seeking – social support strategies than of wishful thinking or avoidance strategies. Problem focused and seeking social support strategies have been found to positively related to various measures of psychological well-being.

METHOD

Sample

A sample of 150 equal numbers of army personnel from officer ranks and other ranks (75 each) were selected for the present purpose.

Tools

The tools used in the present study are as follows:

- (a) **Brief Cope:** The brief cope measure was an abbreviated version of the Cope inventory developed by Carver, Scheier & Weintraub, (1989). It consists of 28 items, having divided into two sub scales, problem focused coping and emotion focused coping. It is a 4 point Likert scale ranging from 1(I haven't been doing this at all) to 4 (I have been doing this a lot). Alfa coefficients ranging from .41 to .85 for the sub scale and .86 for the total instrument have been observed. Estimates for test – retest reliability of the Cope scale ranging from .46 to .86 and .42 to .89 (Carver, Scheier & Weintraub, 1989). Further, the convergent and discriminant validity of the Cope has been reported.
- (b) **ICMR Psychosocial Stress Scale:** Designed by "Indian Council of Medical Research (ICMR)" New Delhi, the scale consists of 40 items which covers following areas: Strained interpersonal relationship, excessive responsibilities, financial constraints, marriage related stress, health related problems, adverse situations and perceived threat. The reliability of the scale has been establish through Cronbach-Alpha ($r=.88$), split half ($r=.88$), test-retest ($r=.72$) and internal consistency

($r=.65$) method. Internal consistency of the tool on its seven subscales ranged from .24 to .77 ($p<.05$). This further established the content validity of the measure.

- (c) **Life Satisfaction Scale:** The life satisfaction scale, developed by Alam and Shrivastava, (1971), consists of 60 items related to six areas, viz, health, personal, economic, marital, social and job. The responses are to be given in yes or no format, indicating satisfaction or dissatisfaction. There is no time limit yet it takes about 20 minutes to complete the questionnaire. Reliability co-efficient was obtained as 0.84.

Procedure

A set of three questionnaires namely Brief cope, psychosocial stressors and life satisfaction were distributed to the army personnel. All the army personnel were asked to fill each questionnaire carefully after reading the instructions given on the top of the each questionnaire.

RESULTS AND DISCUSSION

Correlation analysis on all the variables was computed separately for army personnel of officer ranks and in other ranks. The results are reported in Table 1.

Table1: Correlation among Coping Behaviour (Problem Focused Coping and Emotion Focused Coping), Psychosocial stressors and Life Satisfaction among army personnel of officer ranks and other ranks

S. No.	Army Personnel of Officer's rank		Army Personnel of Other ranks		
	Variable	Psychosocial	Life	Psychosocial	
	Life-satisfaction	-satisfaction	Stressors	Stressors	
1	Coping Behaviour	-.064	.300**	.118	.316**
2	Problem Focused Coping	-.033	.213	.156	.284*
3	Emotion Focused Coping	-.096	.306**	.041	.302**
4	Psychosocial Stressors	1	-.333**	1	-.308**
5	Life-satisfaction		1		1

** $p<.01$, * $p<.05$

Vide Table 1, Pearson co-efficients of correlation indicate that in the present study:

- (a) For army personnel of officer ranks (Table-1) life satisfaction has been found to be significantly and positively related to overall coping behaviour ($r = .300$, $p<.01$) and emotion focused coping ($r = .306$, $p<.01$). No such relationship was evident with regard to problem focused coping.

Coping Behaviour among Army Personnel

- (b) In other ranks (Table -1) life satisfaction has been found to be significantly and positively related to overall coping behaviour ($r = .316, p < .01$), problem focused coping ($r = .284, p < .05$) as well as emotion focused coping ($r = .302, p < .01$).
- (c) A negative and significant correlation was obtained between the coping behaviour and psychosocial stressors of both types of army ($r = -.333, p < .01$ for officer's rank and $r = -.308, p < .01$ for other rank) personnel in the present study.

However, overall coping behaviour and its sub scales (problem focused coping and emotion focused coping) were not related to any kind of psychosocial stressors of present study for the army personnel of other ranks. In case of army personnel of officer ranks only strained interpersonal relationship was found to be negatively related to the use of problem focused coping as well as emotion focused coping behaviour. Perhaps army officers under stress related to interpersonal relationship did not use any of coping mechanism (problem focused coping and emotion focused coping).

Hendix, Steel and Schultz (1987) proposed that since families are the main supporting agent in an individual's life when such an agent is strained, it in turn adversely affects the coping capacity of the individual. Interpersonal relationships at work constitute the day to day interaction between co-workers, or managers and employees. These relations are natural part of the work environment and are usually pleasant and creative, but sometimes are the source of tension and frustration (De Dreu, VanDierendonck and De Best- Waldhober, 2003), thus perhaps the negative influence of strained interpersonal relationship is so great for army personnel of officer ranks that it may reduce their will to cope with these situations. Because of their seniority they may have had so much exposure to these threats over the years that they start accepting them as natural part of their life. They are no longer perceptive about the coping mechanism they may use, or may be because of their senior position, such threat cannot harm them any more professionally or otherwise, so the use of any type of coping is less. However, lack of supportive evidence highlights the need of much further research.

While among army personnel of other ranks (Table-1) life satisfaction has been found to be significantly and positively related to overall coping behaviour, problem focused coping as well as emotion focused coping. For army personnel of officer ranks (Table - 1) life satisfaction has been found to be significantly and positively related to overall coping behaviour and emotion focused coping and not with regard to problem focused coping.

Since coping involves managing taxing circumstances, expanding effort to solve life's problems, seeking to master or reduce stress, coping is central to the stress process and its adaptational outcomes (Santrock, 2006). A stressful

circumstance can be rendered considerably less stressful if one knows how to cope with it (Blonna, 2005; Corbin, Welk, & others, 2006; Greenberg, 2006). Sharon, Hazel & Rebeca (2004) found that people with hope had greater coping efficacy and use more problem focused coping. Anubhuti and Adesh (2007) observed that active coping strategies were effective in promoting the level of life satisfaction. For army personnel of other ranks (Table-1) life satisfaction has been found to be significantly and positively related to overall coping behaviour, problem focused coping as well as emotion focused coping. Probably the army personnel of other ranks show more satisfaction with life when they are able to use both problem focused coping as well as emotion focused coping behaviours. Since they can't say no to the decisions made by their senior officers (Shaim, 1998) this may create undue pressure on them and to deal with such stresses, they may use all possible strategies to be satisfied with life of army personnel.

For army personnel of officer ranks a significant and positive relationship has been emerged between life satisfaction and emotion focused coping i.e. high emotion focused coping leads to high satisfaction with life for them. Probable reasons for this may be that the personnel on higher ranks have always confidential matters to handle and they have more attitude, they lack tendency to seek help from others, cannot discuss all the matters with others and they are always at the 'decision- making' positions where they can't show their inabilities. Carver, Scheier and Weintraub (1989) observed that individuals commonly use venting (or releasing strong feeling about a stressful situation) to help to regulate their emotions. Emotion focused coping can be helpful because it temporarily reduces the threat and allows individuals to recharge by recognizing, processing and expressing their emotions (Austenfild & Stanton, 2004).

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PSYCHOLOGICAL PREDICTORS OF MENTAL HEALTH OF SCHOOL TEACHERS

Mansavee Dubey* and G. S. Gujar**

ABSTRACT

The present study aspired to investigate whether Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills are significant predictors of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers. It was hypothesized that Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills will be significant predictors of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers. A purposive sample of 400 3rd Grade School Teachers 200 from Government Schools and 200 from Private Schools from Rajasthan State was selected. The Predictor Variables were measured by Emotional Intelligence Scale (EIS) (Hyde, A., Pethe, S. and Dhar, U., 2001), NEO-PI (R) (McCrae & Costa, 2003), Presumptive Stressful Life Events Scale (Singh et. al, 1981) and Ways of Coping Questionnaire (WCQ) (Folkman & Lazarus, 1986) whereas the Criterion/Outcome Variables were measured by Mental Health Inventory (MHI) (Singh, J. and Srivastava, A.K., 1983). The Correlational Research Design along with Regression Model was employed. The Multiple Regression Analysis was computed to investigate whether Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills are significant predictors of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in

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Government and Private School Teachers. It was empirically proved that Emotional Intelligence was a significant positive predictor whereas Presumptive Life Stress was a significant negative predictor of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers. The results are interpreted in the light of existing researches.

Keywords: Emotional intelligence, Personality, Presumptive life stress, Coping skills, Positive self-evaluation, Perception of reality, Integration of personality, Autonomy, Group-oriented attitudes, Environmental mastery, and Mental health

INTRODUCTION

Teaching is commonly recognized as one of the most stressful occupations in our nation. Teacher stress results in such consequences as early retirement, long and excessive absences, new teachers leaving during training, and an increase in teachers leaving the profession within their first five years (Bachkirova, 2005). In recent years, professional satisfaction has been decreasing while job pressure has been on a steady rise for teachers. These issues have raised many questions about the growing problem of teacher stress (Guglielmi & Tatrow, 1998).

It has been reported that teacher stress affects the learning environment and ultimately prevents achievement of the teacher's educational goals. This leads to disinterest, negligence, bitterness, and absenteeism among teachers, and can result in teachers leaving the profession (Guglielmi & Tatrow, 1998). In North Carolina, about 28% of teachers who resign each year leave the profession due to a career change, health, being dissatisfied with teaching, teaching at a private or charter school, or for unknown reasons (Annual Report of the Reasons Teachers Leave the Profession, 2007). Although leaving for a private or charter school is listed above, it is rare that this happens because private schools require most teachers to hold an advanced degree and teachers usually are not compensated as well. In fact, half of private schoolteachers who resign each year, do so, to teach at a public school (Miner, 2009). Increasing attention has been given to understanding teacher stress to further study this alarming phenomenon (Blasé, 1982).

Even though stress is quickly becoming a recognized occupational hazard of the teaching profession (Pettegrew & Wolf, 1982), little theoretical work on teacher stress has been attempted or completed (Blasé, 1982), and recently there have been no studies that have focused specifically on stress within the primary school environment. The few studies that have been tried lacked subjects' perceptions (Blasé, 1986) and have been flawed in other areas. Some studies have been focused on large urban school districts, which is not representative of smaller districts in which the majority of teachers are employed. Also, stress has not been dealt with as an organizational matter; meaning ways to lessen job related stress have not been discovered (Bacharach, Bauer, & Conley, 1986).

Psychological Predictors of Mental Health of School Teachers

Two types of stress can ultimately affect teachers. Task based stress, such as dealing with disruptive students, refers to problems that are associated with a variety of specific tasks that teachers must perform in their teaching role. Role based stress, such as an absence of sufficient resources to perform adequately, refers to how teachers' expectations of their role fit in with the actual work-related responsibilities needed to fulfill their role (Pettegrew & Wolf, 1982). Stress within teaching is driven by the organizational factors related to the way in which teachers are expected to work (Hepburn & Brown, 2001). Organizational factors that contribute to teacher stress can include unreasonable directed time budgets, excessive paperwork, unrealistic deadlines, and intimidating inspection regimes (Hepburn & Brown, 2001). A teacher's personality is a factor when explaining the amount of stress that is present.

Teachers' skills, motives, and perceptions of their work environment determine the amount of stress that may take place (Guglielmi & Tatrow, 1998). A teacher who does not have a conflict between personal values and those of educational authorities, has a high ambition to succeed professionally, and is not easily upset or excited; tend to experience the least amount of stress (Bachkirova, 2005). Teacher stress is closely linked to strain and burnout. Strain is any unpleasant behavioural, psychological, or physiological outcome in a teacher (Sutton, 1984). In general, strain is the result of an interaction between a person and their environment. Strain is measured in terms of physiological dysfunction, psychological dysfunction, or behavioural dysfunction (Guglielmi & Tatrow, 1998).

Teacher stress can be caused from a variety of situations. Stress often comes about when teachers have difficult negotiating various aspects of interactions with students (Hepburn & Brown, 2001) or from any circumstances that are considered too demanding, depriving of time, and interfering with instruction (Blasé, 1986). Stress can best be explained by categorizing factors into first and second order stressors. First order stressors directly interfere with teacher effort and can include student apathy, student disruption or discipline, poor student attendance, high student to teacher ratios (large classes), paperwork, prep work, irresponsible colleagues, obtrusive supervisors, lack of effective leadership such as assistant principals or principals, and seemingly non-supportive parents. Stressors that occur most frequently tend to be organizational issues dealing with students, administration, other teachers, and other work relationships (Blasé, 1986). Second order stressors do not interfere directly with teacher effort and can include issues such as low salary, emotional fatigue, frustration, helplessness, stagnation, boredom, and loss of motivation or enthusiasm (Blasé, 1986).

Stress among teachers can also be grouped into three categories: role demands, instructional problems, and interpersonal relationships (Sutton, 1984). Role related stress is said to be the difference between teachers' role expectations

and their actual experiences within that role (Pettegrew & Wolf, 1982). Role demand stressors include ambiguity, overload, conflict (Sutton, 1984), preparedness, and non-participation (Pettegrew & Wolf, 1982). Organizational characteristics such as policies, structure, and processes can also be categorized as role demand stressors (Bacharach, Bauer, & Conley, 1986). Instructional problems or task stress identifies problems associated with a variety of specific tasks that teachers must perform in their teaching role (Pettegrew & Wolf, 1982). Instructional problems can include difficulties with student discipline, competence, inappropriate procedures for student placement, instruction, inadequate standardized tests, grading systems (Sutton, 1984), notification of unsatisfactory work performance, being physically threatened by students (Pettegrew & Wolf, 1982) and sparse or dangerous working conditions (Bacharach, Bauer, & Conley, 1986).

Interpersonal relationships refer to relationships teachers have with fellow professionals or community members within the educational environment. Network interaction and supervision may also fall into this category (Bacharach, Bauer, & Conley, 1986). The most common stressors in this group are conflict with other staff members, and a lack of social support from supervisors and coworkers (Sutton, 1984). Causes of teacher stress can also be broken down into environmental and individual stressors. Most stressors can be found in the work environment and include unfavourable working conditions, heavy workloads, organizational problems, and paucity of resources, lack of support and or autonomy, and decision making.

The work environment can also include physical stressors such as task-related noise, crowding, the size of the classroom and or school, safety or youth violence, as well as administrative pressures such as support from managers and role ambiguity (Hastings & Bham, 2003). Individual characteristics include the unique attributes of teachers such as personality, age, gender, demographic background, the ability to establish and maintain supportive networks, cognitive evaluation of stressors, the ability to cope, type of teacher, and job dissatisfaction (Guglielmi & Tatrow, 1998). Individual stress also can be associated with the compatibility between personal and educational values, ambition to succeed, sensitivity threshold, competitiveness, multiple roles for women teachers (such as parent, caretaker, homemaker, and teacher), and perfection (Bachkirova, 2005).

The prime objective of the present study was to investigate whether Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills are significant predictors of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers.

Hypothesis

It was hypothesized that Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills will be significant predictors of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers.

METHOD

Sample

Initially, around 459 3rd Grade School Teachers were contacted and later on a purposive sample of 400 3rd Grade School Teachers (age range 35-50 years) with balanced number of males and females was retained. Out of these 400 School Teachers; 200 of them were working in Government Schools and the remaining 200 of them were employed with Private Schools. These School Teachers were sampled from various Government and Private Schools of Rajasthan State irrespective of caste, creed and socio-economic status.

Tools

Following tools were used in the present investigation—

1. **Emotional Intelligence Scale (EIS) (Hyde, A., Pethe, S. and Dhar, U., 2001):** The Emotional Intelligence Scale was developed and standardized by Anukool Hyde, Sanjyot Pethe and Upinder Dhar (2001). The scale measures ten different aspects of the Emotional Intelligence orientation. A summated total score is derived. High score in each of the sub scale as well as the total score indicate high level of emotional intelligence and are likely to be high performers. Self-awareness, empathy, self-motivation, emotional stability, managing relations, integrity, self-development, value orientation, commitment and altruistic behaviour are the ten components of the scale. The reliability of the scale was determined by calculating reliability co-efficient on a sample of 200 subjects. The split half reliability coefficient was found to be 0.88. Besides face validity, as all items were related to the variable under focus, the scale has high content validity. It is evident from the assessment of judges / experts that items of the scale are directly related to the concept of emotional intelligence.
2. **NEO-PI (R) (McCrae & Costa, 2003):** For measuring personality, it was decided to administer NEO- Five Factor Inventory by Paul T. Costa & Robert R. McCrae which was published in 1992, though the NEO Five-Factor Inventory (NEO-FFI) is a shortened version of the NEO PI-R, designed to give quick, reliable and valid measures of the five domains of adult personality. The 60 items are rated on a five

point scale. The NEO-FFI has a grade six reading level. The NEO-FFI scales show correlations of .75 to .89 with the NEO-PI validity factors. Internal consistency values range from .74 to .89.

3. **Presumptive Stressful Life Events Scale (Singh et. al, 1981):** Most of the investigators in the field of life events have made use of 'Social Readjustment Rating Scale' (Holmes and Rahe (1967) or 'Scaling of Life events' (Paykel, 1971). In India also mainly these two scales have been used with local transactions but without making any major modification to suit the Indian Population. Because of cultural differences and non-validation of these scales in our population, the results obtained by these studies are thought to be unreliable. To overcome this difficulty and also in view of the various shortcomings of the existing life events scales Singh et al (1981) constructed this new 'Presumptive Stressful Events Scale' suitable for the Indian population and published in Indian Journal of Psychiatry (1984).
4. **Ways of Coping Questionnaire (WCQ) (Folkman & Lazarus, 1986):** This revised test was published in 1985; it is derived from a cognitive - Phenomenological theory of stress and coping that is articulated in Stress, Appraisal and Coping (Lazarus and Folkman, 1984) and elsewhere (Lazarus, 1981; Lazarus and Launier, 1978). The Ways of Coping Questionnaire is based on a definition of coping as the cognitive and behavioural efforts to manage specific external or internal demands appraised as taxing or exceeding the resource of the individual. This definition has four key features: (1) it is process oriented; (2) it speaks of management rather than mastery; (3) it makes no a priori judgment about the quality of coping process; and (4) it implies a stress- based distinct between coping and automatic adaptive behaviours. The Ways of Coping Questionnaire was developed to provide researchers with a theoretically derived measure that could be used to explore the role of coping in the relationship between stress and adaptational outcomes. The Ways of Coping Questionnaire consist of 50 items (plus 16 fill items) within eight empirically derived scales (Folkman & Lazarus, 1988). Because the Ways of Coping Questionnaire measures coping process, which, by definition, is variable, traditional test - retest estimates of reliability are inappropriate. Reliability can be evaluated, however, by examining the internal consistency of the coping measures, estimated with Cronbach's coefficient alpha. Internal Consistency estimates of coping measures generally fall at the low end of the traditionally acceptable range. Evidence of construct validity is found in the fact that the results of the studies are consistent with theoretical predictions, namely, that (1) Coping consists of both problem focused and emotion focused strategies and (2) coping is a process.

5. **Mental Health Inventory (MHI) (Singh, J. and Srivastava, A.K., 1983):** The Mental Health Inventory (MHI) has been designed to measure mental health (positive) of normal individuals. The salient feature of the scale lies in inclusion of the symptoms of psychological well-being or positive symptoms of mental health along with absence of mental ill health. For the purpose of developing the inventory, Mental Health was operationally defined as the person's ability to make positive self – evaluation, to perceive the reality, to integrate the personality, autonomy, group-oriented attitudes and environmental mastery. The MHI consists of six dimensions which are as follows: Positive Self-evaluation (PSE), Perception of Reality (PR), Integration of Personality (IP), Autonomy (AUTNY), Group-oriented Attitude (GOA) and Environmental Mastery (EM). The reliability of the inventory was determined by split-half method using odd-even procedure which was 0.73. The construct validity of the inventory is determined by finding coefficient of correlation between scores on Mental Health Inventory (MHI) and General Health Questionnaire (GHQ) (Goldberg, 1972). It was found to be .54. The Inventory was also validated against Personal Adjustment Scale (a sub-scale of S.D. Inventory) developed by Pestonjee (1973) which yielded a positive correlation of .57 revealing moderate validity.
6. **Happiness Scale (Argyle and Hills, 2002):** The Oxford Happiness Questionnaire short form (Hills & Argyle, 2002) is an 8-item measure of happiness. They intended to be a replacement for the full version when administration time is short. They provided initial evidence for the psychometric properties of both the 29-item and the 8-item measures. Moreover, both versions of the measure have demonstrated validity with measures of happiness, personality, self-esteem, satisfaction, life orientation, and life regard (Hills & Argyle, 2002), and measures of religiosity (Lewis, Maltby, & Day, 2005). The results for the full and shorter versions were significantly and strongly correlated, $r(168)=0.93$, $P<0.001$ (Hills and Argyle, 2002).

Predictor Variables

- Emotional Intelligence
- Personality
- Presumptive Life Stress
- Coping Skills

Criterion/Outcome Variables

- Positive Self-evaluation (Mental Health)
- Perception of Reality (Mental Health)

RESULTS AND DISCUSSION

The Research Design for the proposed study was a Correlational one along with Regression Model as it was an exploratory research. The Multiple Regression Analysis was computed to investigate whether Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills are significant predictors of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers.

Table 1: Coefficients of Regression Model: Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills on Positive Self-evaluation (Mental Health) in Government and Private School Teachers

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F	df1	df2	Sig. F Change
1	.930 ^a	.865	.860	2.994	.865	164.015	15	384	.000

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

ANOVA ^b						
	<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1	Regression	22055.461	15	1470.364	164.015	.000 ^a
	Residual	3442.499	384	8.965		
	Total	25497.960	399			

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

b. Dependent Variable: PSE

Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-83.835	5.106		-16.417	.000
	EI	1.172	.028	.874	41.510	.000
	N	.114	.064	.036	1.793	.074
	E	.009	.040	.004	.219	.826
	O	-.010	.039	-.005	-.253	.800
	A	.031	.032	.019	.955	.340
	C	-.002	.031	-.002	-.081	.936
	PLS	-.061	.012	-.116	-5.213	.000

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CC	-.028	.072	-.008	-.385	.701
Distc	-.010	.079	-.004	-.131	.896
SC	.048	.093	.010	.514	.608
SSS	-.029	.053	-.013	-.549	.583
AR	.040	.095	.010	.415	.678
EA	-.023	.056	-.011	-.411	.681
PPS	-.060	.062	-.028	-.963	.336
Po R	.074	.057	.042	1.285	.199

a. Dependent Variable: PSE

The Multiple Regression Analysis was computed through SPSS 17.0 to investigate whether Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills are significant predictors of Positive Self-evaluation dimension of Mental Health in Government and Private School Teachers. The Table 1 depicts the predictors of Positive Self-evaluation dimension of Mental Health in Government and Private School Teachers. The R^2 value is .865 which explains 87% of variance in Government and Private School Teachers. The value of adjusted R^2 is .860 which explains 86% of variance in Government and Private School Teachers. The F ratio is 164.02 which is significant at 0.01 level of confidence and thus explains variance. It is observed that the constant \hat{a} coefficient is -83.84 and Standardized \hat{a} coefficient of Emotional Intelligence (EI) is .874 which is significant at 0.01 level of confidence. The t-ratio of Emotional Intelligence (EI) is 41.51 which is also significant at 0.01 level of confidence. It is empirically proved that Emotional Intelligence is a significant positive predictor of Positive Self-evaluation dimension of Mental Health. Therefore, as Emotional Intelligence increases, Positive Self-evaluation dimension of Mental Health also increases in Government and Private School Teachers. It is also observed that the Standardized \hat{a} coefficient of Presumptive Life Stress (PLS) is -.116 which is significant at 0.01 level of confidence. The t-ratio of Presumptive Life Stress (PLS) is -5.21 which is also significant at 0.01 level of confidence. It is empirically proved that Presumptive Life Stress is a significant negative predictor of Positive Self-evaluation dimension of Mental Health in Government and Private School Teachers. Therefore, as Presumptive Life Stress increases, Positive Self-evaluation dimension of Mental Health decreases in Government and Private School Teachers.

It is again observed that the Standardized \hat{a} coefficients of Personality factors— Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) & Conscientiousness (C) and Coping Skills dimensions – Confrontive Coping (CC), Distancing (Distc), Self-controlling (SC), Seeking Social Support (SSS), Accepting Responsibility (AR), Escape-Avoidance (EA), Planful Problem Solving (PPS) & Positive Reappraisal (PoR) are .036, .004, -.005, .019, -.002, -.008, -.004, .010, -.013, .010, -.011, -.028 and .042 respectively which are not significant

even at 0.05 level of confidence. Therefore, Personality factors – Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions – Confrontive Coping, Distancing, Self-controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving & Positive Reappraisal are not significant predictors of Positive Self-evaluation dimension of Mental Health in Government and Private School Teachers.

The Table 2 depicts the predictors of Perception of Reality dimension of Mental Health in Government and Private School Teachers. The R^2 value is .863 which explains 86% of variance in Government and Private School Teachers. The value of adjusted R^2 is .858 which explains 86% of variance in Government and Private School Teachers. The F ratio is 161.58 which is significant at 0.01 level of confidence and thus explains variance. It is observed that the constant α coefficient is -83.35 and Standardized β coefficient of Emotional Intelligence (EI) is .894 which is significant at 0.01 level of confidence. The t-ratio of Emotional Intelligence (EI) is 42.19 which is also significant at 0.01 level of confidence.

Table 2: Coefficients of Regression Model: Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills on Perception of Reality (Mental Health) in Government and Private School Teachers

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.929 ^a	.863	.858	3.004	.863	161.575	15	384	.000

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

ANOVA ^b						
	<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1	Regression	21877.773	15	1458.518	161.575	.000 ^a
	Residual	3466.325	384	9.027		
	Total	25344.098	399			

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

b. Dependent Variable: PR

Coefficients ^a				
Model	Unstandardized Coefficients		Standardized Coefficients	Sig.
	B	Std. Error	Beta	

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1	(Constant)	-83.353	5.124		-16.267	.000
	EI	1.195	.028	.894	42.185	.000
	N	.003	.064	.001	.051	.959
	E	-.026	.040	-.013	-.651	.516
	O	-.005	.039	-.002	-.116	.907
	A	.001	.032	.001	.041	.967
	C	-.007	.031	-.005	-.239	.811
	PLS	-.041	.012	-.078	-3.468	.001
	CC	.106	.072	.032	1.463	.144
	Distc	-.002	.079	-.001	-.028	.977
	SC	.129	.094	.027	1.383	.167
	SSS	.000	.053	.000	-.004	.997
	AR	.033	.096	.008	.343	.732
	EA	-.009	.056	-.005	-.162	.871
	PPS	.013	.062	.006	.204	.839
	Po R	-.054	.058	-.031	-.946	.345

a. Dependent Variable: PR

It is empirically proved that Emotional Intelligence is a significant positive predictor of Perception of Reality dimension of Mental Health. Therefore, as Emotional Intelligence increases, Perception of Reality dimension of Mental Health also increases in Government and Private School Teachers. It is also observed that the Standardized β coefficient of Presumptive Life Stress (PLS) is -.078 which is significant at 0.01 level of confidence. The t-ratio of Presumptive Life Stress (PLS) is -3.47 which is also significant at 0.01 level of confidence. It is empirically proved that Presumptive Life Stress is a significant negative predictor of Perception of Reality dimension of Mental Health in Government and Private School Teachers. Therefore, as Presumptive Life Stress increases, Perception of Reality dimension of Mental Health decreases in Government and Private School Teachers.

It is again observed that the Standardized β coefficients of Personality factors - Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) & Conscientiousness (C) and Coping Skills dimensions - Confrontive Coping (CC), Distancing (Distc), Self-controlling (SC), Seeking Social Support (SSS), Accepting Responsibility (AR), Escape-Avoidance (EA), Planful Problem Solving (PPS) & Positive Reappraisal (PoR) are .001, -.013, -.002, .001, -.005, .032, -.001, .027, .000, .008, -.005, .006 and -.032 respectively which are not significant even at 0.05 level of confidence. Therefore, Personality factors - Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions - Confrontive Coping, Distancing, Self-controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving

& Positive Reappraisal are not significant predictors of Perception of Reality dimension of Mental Health in Government and Private School Teachers.

The Table 3 depicts the predictors of Integration of Personality dimension of Mental Health in Government and Private School Teachers. The R^2 value is .853 which explains 85% of variance in Government and Private School Teachers. The value of adjusted R^2 is .847 which explains 85% of variance in Government and Private School Teachers. The F ratio is 148.43 which is significant at 0.01 level of confidence and thus explains variance. It is observed that the constant $\hat{\alpha}$ coefficient is -72.50 and Standardized $\hat{\alpha}$ coefficient of Emotional Intelligence (EI) is .826 which is significant at 0.01 level of confidence. The t-ratio of Emotional Intelligence (EI) is 37.57 which is also significant at 0.01 level of confidence. It is empirically proved that Emotional Intelligence is a significant positive predictor of Integration of Personality dimension of Mental Health. Therefore, as Emotional Intelligence increases, Integration of Personality dimension of Mental Health also increases in Government and Private School Teachers. It is also observed that the Standardized $\hat{\alpha}$ coefficient of Presumptive Life Stress (PLS) is -.163 which is significant at 0.01 level of confidence. The t-ratio of Presumptive Life Stress (PLS) is -7.00 which is also significant at 0.01 level of confidence. It is empirically proved that Presumptive Life Stress is a significant negative predictor of Integration of Personality dimension of Mental Health in Government and Private School Teachers. Therefore, as Presumptive Life Stress increases, Integration of Personality dimension of Mental Health decreases in Government and Private School Teachers.

Table 3: Coefficients of Regression Model: Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills on Integration of Personality (Mental Health) in Government and Private School Teachers

Model Summary									
Model	R	Change Statistics							
		R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.924 ^a	.853	.847	3.310	.853	148.429	15	384	.000
a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc									
ANOVA ^b									
Model		Sum of Squares	df	Mean Square	F				Sig.
1	Regression	24388.646	15	1625.910	148.429				.000 ^a
	Residual	4206.394	384	10.954					
	Total	28595.040	399						

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

b. Dependent Variable: IP

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Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	-72.502	5.645		-12.844	.000
1					
EI	1.173	.031	.826	37.572	.000
N	.083	.071	.025	1.178	.239
E	.022	.044	.010	.495	.621
O	-.038	.043	-.018	-.882	.378
A	.013	.035	.008	.373	.709
C	-.022	.034	-.014	-.645	.520
PLS	-.091	.013	-.163	-7.000	.000
CC	-.007	.080	-.002	-.087	.930
Distc	.024	.087	.008	.274	.785
SC	.007	.103	.001	.071	.943
SSS	.053	.058	.022	.900	.369
AR	-.181	.105	-.042	-1.722	.086
EA	.023	.061	.011	.381	.704
PPS	-.055	.068	-.025	-.811	.418
Po R	.026	.063	.014	.417	.677

^a Dependent Variable: IP

It is again observed that the Standardized β coefficients of Personality factors – Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) & Conscientiousness (C) and Coping Skills dimensions – Confrontive Coping (CC), Distancing (Distc), Self-controlling (SC), Seeking Social Support (SSS), Accepting Responsibility (AR), Escape-Avoidance (EA), Planful Problem Solving (PPS) & Positive Reappraisal (PoR) are .025, .010, -.018, .008, -.014, -.002, .008, .001, .022, -.042, .011, -.025 and .014 respectively which are not significant even at 0.05 level of confidence. Therefore, Personality factors – Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions – Confrontive Coping, Distancing, Self-controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving & Positive Reappraisal are not significant predictors of Integration of Personality dimension of Mental Health in Government and Private School Teachers. Thus the hypothesis no. 4 [H_4] that Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills will be significant predictors of Mental Health in Government and Private School Teachers stands rejected specifically with respect

to Personality factors – Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions – Confrontive Coping, Distancing, Self-controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving & Positive Reappraisal regarding Integration of Personality dimension of Mental Health and alternative/rival hypothesis is tenable.

The Table 4 depicts the predictors of Autonomy dimension of Mental Health in Government and Private School Teachers. The R^2 value is .877 which explains 88% of variance in Government and Private School Teachers. The value of adjusted R^2 is .873 which explains 87% of variance in Government and Private School Teachers. The F ratio is 183.04 which is significant at 0.01 level of confidence and thus explains variance. It is observed that the constant \hat{a} coefficient is -82.38 and Standardized \hat{a} coefficient of Emotional Intelligence (EI) is .884 which is significant at 0.01 level of confidence. The t-ratio of Emotional Intelligence (EI) is 44.05 which is also significant at 0.01 level of confidence. It is empirically proved that Emotional Intelligence is a significant positive predictor of Autonomy dimension of Mental Health. Therefore, as Emotional Intelligence increases, Autonomy dimension of Mental Health also increases in Government and Private School Teachers. It is also observed that the Standardized \hat{a} coefficient of Presumptive Life Stress (PLS) is -.098 which is significant at 0.01 level of confidence. The t-ratio of Presumptive Life Stress (PLS) is -4.59 which is also significant at 0.01 level of confidence. It is empirically proved that Presumptive Life Stress is a significant negative predictor of Autonomy dimension of Mental Health in Government and Private School Teachers. Therefore, as Presumptive Life Stress increases, Autonomy dimension of Mental Health decreases in Government and Private School Teachers.

Table 4: Coefficients of Regression Model: Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills on Autonomy (Mental Health) in Government and Private School Teachers

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.937 ^a	.877	.873	2.775	.877	183.043	15	384	.000

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	21140.352	15	1409.357	183.043	.000 ^a
Residual	2956.645	384	7.700		
Total	24096.998	399			

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

b. Dependent Variable: Auto

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	-82.384	4.732		-17.408	.000
EI	1.153	.026	.884	44.050	.000
N	.067	.059	.022	1.131	.259
E	-.011	.037	-.006	-.289	.773
O	-.035	.036	-.018	-.965	.335
A	-.001	.030	-.001	-.033	.974
C	-.011	.028	-.008	-.380	.704
PLS	-.050	.011	-.098	-4.586	.000
CC	-.048	.067	-.015	-.720	.472
Distc	-.014	.073	-.005	-.188	.851
SC	.146	.086	.031	1.688	.092
SSS	-.001	.049	-.001	-.023	.981
AR	-.010	.088	-.003	-.119	.905
EA	.010	.051	.005	.191	.848
PPS	-.040	.057	-.020	-.692	.490
Po R	.006	.053	.003	.104	.917

a. Dependent Variable: Auto

It is again observed that the Standardized β coefficients of Personality factors - Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) & Conscientiousness (C) and Coping Skills dimensions - Confrontive Coping (CC), Distancing (Distc), Self-controlling (SC), Seeking Social Support (SSS), Accepting Responsibility (AR), Escape-Avoidance (EA), Planful Problem Solving (PPS) & Positive Reappraisal (PoR) are .022, -.006, -.018, -.001, -.008, -.015, -.005, .031, -.001, -.003, .005, -.020 and .003 respectively which are not significant even at 0.05 level of confidence. Therefore, Personality factors - Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions - Confrontive Coping, Distancing, Self-controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving & Positive Reappraisal are not significant predictors of Autonomy dimension of Mental Health in Government and Private School Teachers.

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Table 5: Coefficients of Regression Model: Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills on Group-oriented Attitudes (Mental Health) in Government and Private School Teachers

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F	df1	df2	Sig. F Change
1	.939 ^a	.882	.877	2.761	.882	190.499	15	384	.000

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Diste

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21790.430	15	1452.695	190.499	.000 ^a
	Residual	2928.280	384	7.626		
	Total	24718.710	399			

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Diste

b. Dependent Variable: GoA

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	-82.798	4.710		-17.580	.000
	EI	1.192	.026	.903	45.781	.000
	N	.010	.059	.003	.166	.869
	E	-.014	.037	-.007	-.379	.705
	O	-.014	.036	-.007	-.383	.702
	A	-.009	.030	-.005	-.288	.774
	C	-.003	.028	-.002	-.107	.915
	PLS	-.042	.011	-.082	-3.914	.000
	CC	-.053	.067	-.016	-.799	.425
	Diste	-.044	.073	-.017	-.609	.543
	SC	.172	.086	.036	2.000	.046
	SSS	.031	.049	.014	.635	.526
	AR	-.044	.088	-.011	-.503	.615
	EA	.035	.051	.018	.690	.491
	PPS	.071	.057	.034	1.243	.215
	Po R	-.037	.053	-.021	-.697	.486

a. Dependent Variable: GoA

The Table 5 depicts the predictors of Group-oriented Attitudes dimension of Mental Health in Government and Private School Teachers. The R^2 value is .882 which explains 88% of variance in Government and Private School Teachers. The value of adjusted R^2 is .877 which explains 88% of variance in Government and Private School Teachers. The F ratio is 190.50 which is significant at 0.01 level of confidence and thus explains variance. It is observed that the constant \hat{a} coefficient is -82.80 and Standardized \hat{a} coefficient of Emotional Intelligence (EI) is .903 which is significant at 0.01 level of confidence. The t-ratio of Emotional Intelligence (EI) is 45.78 which is also significant at 0.01 level of confidence. It is observed that the Standardized \hat{a} coefficient of Self-controlling (SC) is .036 which is significant at 0.01 level of confidence. The t-ratio of Self-controlling (SC) is 2.00 which is also significant at 0.01 level of confidence. It is empirically proved that Emotional Intelligence and Self-controlling are significant positive predictor of Group-oriented Attitudes dimension of Mental Health. Therefore, as Emotional Intelligence and Self-controlling increase, Group-oriented Attitudes dimension of Mental Health also increases in Government and Private School Teachers. It is also observed that the Standardized \hat{a} coefficient of Presumptive Life Stress (PLS) is -.082 which is significant at 0.01 level of confidence. The t-ratio of Presumptive Life Stress (PLS) is -3.91 which is also significant at 0.01 level of confidence. It is empirically proved that Presumptive Life Stress is a significant negative predictor of Group-oriented Attitudes dimension of Mental Health in Government and Private School Teachers. Therefore, as Presumptive Life Stress increases, Group-oriented Attitudes dimension of Mental Health decreases in Government and Private School Teachers.

It is again observed that the Standardized \hat{a} coefficients of Personality factors – Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) & Conscientiousness (C) and Coping Skills dimensions – Confrontive Coping (CC), Distancing (Distc), Seeking Social Support (SSS), Accepting Responsibility (AR), Escape-Avoidance (EA), Planful Problem Solving (PPS) & Positive Reappraisal (PoR) are .003, -.007, -.007, -.005, -.002, -.016, -.017, .014, -.011, .018, .034 and -.021 respectively which are not significant even at 0.05 level of confidence. Therefore, Personality factors – Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions – Confrontive Coping, Distancing, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving & Positive Reappraisal are not significant predictors of Group-oriented Attitudes dimension of Mental Health in Government and Private School Teachers.

Table 6: Coefficients of Regression Model: Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills on Environmental Mastery (Mental Health) in Government and Private School Teachers

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F	df1	df2	Sig. F Change
1	.927 ^a	.859	.853	3.146	.859	155.460	15	384	.000

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Diste

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23086.046	15	1539.070	155.460	.000 ^a
	Residual	801.651	384	9.900		
	Total	26887.698	399			

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Diste

b. Dependent Variable: EM

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	-79.679	5.366		-14.848	.000
	EI	1.202	.030	.873	40.525	.000
	N	.051	.067	.016	.768	.443
	E	-.003	.042	-.001	-.061	.951
	O	-.030	.041	-.015	-.728	.467
	A	.023	.034	.014	.676	.499
	C	-.011	.032	-.008	-.353	.724
	PLS	-.059	.012	-.109	-4.787	.000
	CC	.013	.076	.004	.177	.859
	Diste	-.102	.083	-.037	-1.231	.219
	SC	.074	.098	.015	.752	.452
	SSS	-.014	.056	-.006	-.253	.800
	AR	-.084	.100	-.020	-.842	.401
	EA	.004	.058	.002	.071	.944
	PPS	-.125	.065	-.058	-1.927	.055
	Po R	.100	.060	.056	1.660	.098

a. Dependent Variable: EM

The Table 6 depicts the predictors of Environmental Mastery dimension of Mental Health in Government and Private School Teachers. The R^2 value is .859

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which explains 86% of variance in Government and Private School Teachers. The value of adjusted R^2 is .853 which explains 85% of variance in Government and Private School Teachers. The F ratio is 155.46 which is significant at 0.01 level of confidence and thus explains variance. It is observed that the constant \hat{a} coefficient is -79.68 and Standardized \hat{a} coefficient of Emotional Intelligence (EI) is .873 which is significant at 0.01 level of confidence. The t-ratio of Emotional Intelligence (EI) is 40.53 which is also significant at 0.01 level of confidence. It is empirically proved that Emotional Intelligence is a significant positive predictor of Environmental Mastery dimension of Mental Health. Therefore, as Emotional Intelligence increases, Environmental Mastery dimension of Mental Health also increases in Government and Private School Teachers. It is also observed that the Standardized \hat{a} coefficient of Presumptive Life Stress (PLS) is -.109 which is significant at 0.01 level of confidence. The t-ratio of Presumptive Life Stress (PLS) is -4.79 which is also significant at 0.01 level of confidence. It is also observed that the Standardized \hat{a} coefficient of Planful Problem Solving (PPS) dimension of Coping Skills is -.058 which is significant at 0.01 level of confidence. The t-ratio of Planful Problem Solving (PPS) dimension of Coping Skills is -1.93 which is also significant at 0.01 level of confidence. It is empirically proved that Presumptive Life Stress and Planful Problem Solving dimension of Coping Skills are significant negative predictors of Environmental Mastery dimension of Mental Health in Government and Private School Teachers. Therefore, as Presumptive Life Stress and Planful Problem Solving dimension of Coping Skills increase, Environmental Mastery dimension of Mental Health decreases in Government and Private School Teachers.

It is again observed that the Standardized \hat{a} coefficients of Personality factors - Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) & Conscientiousness (C) and Coping Skills dimensions - Confrontive Coping (CC), Distancing (Diste), Self-controlling (SC), Seeking Social Support (SSS), Accepting Responsibility (AR), Escape-Avoidance (EA) & Positive Reappraisal (PoR) are .016, -.001, -.015, .014, -.008, .004, -.037, .015, -.006, -.020, .002 and .056 respectively which are not significant even at 0.05 level of confidence. Therefore, Personality factors - Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions - Confrontive Coping, Distancing, Self-controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance & Positive Reappraisal are not significant predictors of Environmental Mastery dimension of Mental Health in Government and Private School Teachers.

CONCLUSION

The present research reported Emotional Intelligence as a significant positive predictor whereas Presumptive Life Stress was a significant negative predictor of Positive Self-evaluation, Perception of Reality, Integration of Personality,

Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers.

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IMPACT OF SPORTS PARTICIPATION ON SELF-CONCEPT OF HIGHER SECONDARY STUDENTS

Samyak Makwana*

ABSTRACT

The present investigation was conducted to compare Self-concept of students who participated in Sport with Non-Participating Students. For observing the impact of Sport on Self-Concept, 400 Students studying in 12th standard (mean age is 17.12 ± 0.320) were selected from non-residential high schools of Surendrangar, Gujarat (India). Four groups, each consists of 100 students were drawn such that First and Second Group consisted of Arts and Science students, respectively, who participated in sports. Similarly, Third & forth Group consisted of Arts and Science students who did not participate in sports. Self-Concept Questionnaire was used for assess self-concept, For analysis of the results, F test followed by t-test was used. Findings indicate there is a significant differences in total Self-concept among Sport participating and Non-participating groups. Further analysis indicated that students who participated in sports had higher physical self-concept than non-participating group.

Keywords: Civil behaviour, Mental health, Physical health, Self-concept, Social development, and Sport participation

INTRODUCTION

Involvement in Sports is essential for developing good physical health and mental health both. It impacts development of characteristics, such as, personality, like ego functions, leadership, problem solving approach, socialization etc. A study by Canadian Council of Social Development (2001) indicated that participating in

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sports activities positively influenced physical and social development, civil behaviour and Social skill development in youth. Sports improved their health, helped them make friends, improved their feelings about themselves, helped them succeed at school, and become more active with their family. Sports provides pleasure for children and gives them the opportunity to meet new people and make new friendships, breaking the isolated mould many low income and underprivileged youth fall under. Children develop a sense of self-belonging and confidence through social cohesion. Participation in sport improves the development of peer relationships, establishes the notion of trust and builds teamwork skills. Participants experience a high degree of interaction with other individuals within their community, which not only benefits the child, but such interactions also translate into the community's socio and economic development. Thus, in addition to the personal benefits for the child, youth involvement in sports also has a broader impact on the overall community. Participation in sport has a positive effect on reducing the involvement and exposure youths may have to violence and unethical activity. Oguma and Shinoda (2004) showed that sports or physical activities of moderate intensity, decreases the risk of long term physical illness such as diabetes, hypertension and heart diseases. Not only physical benefits, psychological or mental characteristics are also associated with physical activity participation. Marsh, Richards, Johnson, Roche, & Treymayne (1995) noted that self-esteem and physical activity have positive correlation. Dishman *et al.* (2006) indicated in their study that adolescent girls who participate in sports had higher level of self-esteem, more positive mood and less depression as compare to sport non-participating girls. Centre for Research in Girls and Women in Sports, Minnesota (1997) concluded that sport participating girls have more satisfied in terms of body image than non- participating

In 1998, a survey in Canada found that almost 2.2 million Canadian children regularly took part in some kind of organised sport activity (Kremarik, 2000). In America, 20 million children aged 6-18, participated in organised sports after school (Chambers, 1991). In a South Australian study, 69% of 12 year old boys and 62% of 12 year old girls participated in sports as their first choice of leisure activity (Robertson, 1992). The growth in youth sport participation has been paralleled by an increased interest in competitive sport by physical educators, social scientists and the media. It has been claimed that sport activities assist children's physical growth and maturation (Committee on Sports Medicine and Fitness and Committee on School Health, 2001), physiological functions (Stuart, Shephard, & Siefen, 2002), opportunities for socialisation (Videon, 2002) and psychological development (Stuart, 2003).

Self-concept has been defined to consist of learned verbal labels about oneself that elicit emotions and direct or control behaviour. Positive verbal labels are expected to lead to successful performance that is reinforced by others, which

in turn, reinforces positive self-concept (Staats, 1996). With the progress in theoretical understanding of self-concept, the idea of self-concept as a uni-dimensional general sense of self-worth or a global self-concept was replaced by the notion of a multifaceted and hierarchical structure. Measuring self-concept in physical, social and academic perspectives became possible with the development of instruments examining multifaceted self-concept, such as the Tennessee Self-Concept Scale, the Piers-Harris Self-Concept and the Self-Description Questionnaire (SDQ) (Bryne, 1996).

Investigations of the effects of sport intervention programs on the self-concept of children have adopted an experimental approach. The results demonstrated a positive effect on children's self-concept after the intervention. The experimental programs included swimming (Miller, 1989), basketball and field hockey (Salokun, 1990), athletics (Percy, Dziuban & Martin, 1981). Studies have utilized multidimensional assessment methods to evaluate children's perceptions of their specific sport competence, physical efficacy, and physical competence. It appears that specific measures of physical self-concept have been more accurate and reliable than measures of global self-worth in predicting sport participation (Weiss, 1993).

The multidimensional self-concept measurements have provided a vehicle for a comprehensive investigation of the differences between participation in sport and a diverse range of self-concepts of children, such as peer relations, parent relations and several areas of academic self-concept such as maths and reading. For example, studies have identified a positive link between participation in sport and children's socialisation (Videon, 2002). Surprisingly, few researchers have attempted to investigate the relationship between self-concept in peer relations and the extent of sports participation.

The present research was conducted to compare self-concept of students who participated in sports with non-participating students. It was hypothesized that there is no significant differences in Total Self-concept of sport or the score on the various dimensions (Physical, Social, Temperamental, Educational, Intellectual and Moral) of Self-concept of sport participating students and non-participating students.

METHOD

Design

An ex facto research design used for the present research.

Sample

Four hundred students were selected from general population of Surendrangar district, Gujarat (India) from students of 12th standard of arts and science stream. Four groups, each consisting of 100 students were formulated

where Group 1 consisted of Arts students who participated in sports, Group 2 of Science students who participated in sports, Group 3 of Arts, Non-participating students and Group 4 of science Non-participating students. All the students were aged 17-18 years (Mean \pm SD = 17.12 \pm 0.3), Middle and Higher Socio-Economic Status (SD=0.2), Hindu and Jain religion followers (SD=0.2).

Tools

The tools used to assess the variables under study are as follows:

Self-Concept Questionnaire (SCQ- Sarswat and Gaur, 1981): The Self-Concept questionnaire provides six dimensions of Self-Concept 1. Physical, 2. Social, 3. Intellectual, 4. Moral, 5. Educational, 6. Temperamental. It also gives a total Self-Concept score. The inventory contains 48 items. Each dimension contains eight items. The respondent is provided with five alternatives to give his responses ranging from most acceptable to least acceptable description of his Self-Concept. There are five category of degree of self-concept were the cut off scores for total self-concept are 193-240 = High self-concept, 145-192 = Above average self-concept, 97-144 = Average self-concept, 49-96 = Below average and 1-48 = Low-self concept. Similarly 33-40, 25-32, 17-24, 9-16, 0-8 score range indicates high, above average, average, below average and low self-concept in terms of Physical, Social, Temperamental, Educational, Moral and Intellectual self-concept. The Validity of scale is 0.8 and Reliability is 0.9.

Procedure

To observe impact of Sport on Self-concept of higher secondary students, 400 students, age 17 to 18, middle and higher socio economic status, hindu and jain religion belonging were selected from general population of highschool of Surendranagar-Gujarat-India. After obtaining written consent for data collection, self-concept questionnaire was filled up by each student.

RESULTS AND DISCUSSION

The Self-concept of each student was calculated (score on each dimension as well as the total score) and group means along with standard deviation were calculated.

Table 1: Mean and SD of Self-Concept of Arts and Science/Sports Participating and Non Participating Groups

Variable	Comparison Groups		Mean	SD	t value
Total	Arts Sports	(Gr 1)	151.10	6.28	0.11
Self-concept	Science Sports	(Gr 2)	150.99	7.34	
	Arts Non-sports	(Gr 3)	141.16	8.71	

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SC-1	Science Non-sports	(Gr 4)	140.49	8.34	0.55
	Arts Sports	(Gr 1)	27.24	3.35	0.48
	Science Sports	(Gr 2)	27.49	3.85	
	Arts Non-sports	(Gr 3)	21.48	4.61	0.95
SC-2	Science Non-sports	(Gr 4)	20.86	4.55	
	Arts Sports	(Gr 1)	27.49	3.61	.91
	Science Sports	(Gr 2)	27.95	3.46	
	Arts Non-sports	(Gr 3)	19.64	3.98	0.94
SC-3	Science Non-sports	(Gr 4)	19.10	4.11	
	Arts Sports	(Gr 1)	23.51	0.50	1.1
	Science Sports	(Gr 2)	23.26	2.20	
	Arts Non-sports	(Gr 3)	24.65	2.54	0.80
SC-4	Science Non-sports	(Gr 4)	24.37	2.34	
	Arts Sports	(Gr 1)	21.22	3.76	
	Science Sports	(Gr 2)	21.22	3.76	0.0
	Arts Non-sports	(Gr 3)	24.13	1.86	2.7*
SC-5	Science Non-sports	(Gr 4)	25.16	3.17	
	Arts Sports	(Gr 1)	23.45	0.50	.70
	Science Sports	(Gr 2)	23.50	0.50	
	Arts Non-sports	(Gr 3)	23.46	0.52	.75
SC-6	Science Non-sports	(Gr 4)	23.52	0.59	
	Arts Sports	(Gr 1)	28.19	3.50	1.2
	Science Sports	(Gr 2)	27.57	3.71	
	Arts Non-sports	(Gr 3)	27.80	3.47	0.62
	Science Non-sports	(Gr 4)	27.48	3.74	

From Table 1 it can be seen that only one of the mean difference, *i.e.* non sports arts and science group on SC-4 was significant. Thus it is apparent that self-concept does not differ between the arts and science students.

Table 2: Comparison of self-concept between Arts sports and non-sports groups

<i>Self Concept</i>	<i>Mean difference</i>	<i>T</i>
Total Self-Concept	9.9	9.2*
Physical Self-concept	5.7	10.0*
Social Self-Concept	7.8	14.5*
Temperamental Self-Concept	1.1	4.3*
Educational Self-Concept	2.9	6.9*
Moral Self-Concept	1.0	0.13

From Table 2 it can be seen that there was a significant difference between the Arts Sports and non-sports groups on the total as well as dimension scores except moral and intellectual dimension.

Table 3: Comparison of self-concept between Science sports and non-sports groups

<i>Self Concept</i>	<i>Mean difference</i>	<i>T</i>
Total Selfconcept	10.5	9.4*
Physical Self-concept	06.6	11.1*
Social Self-concept	08.8	16.4*
Temperamental Self-concept	1.1	3.4*
Educational Self-concept	3.9	8.0*
Moral Self-concept	2.0	0.2
Intellectual Self-concept	09.0	0.17

$p < 0.01$

Similar to the arts group, here again there was a significant difference between the Sports and non-sports groups on the total as well as dimension scores except moral and intellectual dimension.

Table 4: One Way Analysis of Variance of Self concept of four groups

<i>Variable</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F value</i>
Physical	3860	3	1287	75.46*
Self-Concept	6752	396	17	
	10612	399		
Social Self-Concept	6997	3	2332	161*
	5727	396	14	
	12724	399		
Temperamental	133	3	44	10
Self-Concept	1694	396	4	
	1827	399		
Educational	1226	3	408	39
Self-Concept	4147	396	10	
	5373	399		
Moral Self-Concept	0.3	3	0.1	0.3
	111	396	0.2	
	111.3	399		
Intellectual	30.0	3	10.0	0.7
Self-Concept	5172	396	13.0	
	5202	399		
Total Self Concept	10468	3	34.89	58.37*
	23672	396	60.00	
	34140	399		

$p < 0.01$

Table 4 indicates there is significant differences among the in terms of Total self concept, Physical self concept and Social Self concept, There are no significant differences in Temperamental, Educational, Moral and intellectual self concept.

Studies have investigated the extent of the relationship between participation in a sport program and children's global self-concept. Klint's (1985) research showed that sport participants scored significantly higher on the perceived general self-worth scale when compared to non-participants. The results this study identified that participants had a higher level of *perceived self-worth* than did non-participants. Studies such as Alexander (1990), Biddle (1993), Hope (1989) and MacMahon (1990) reported a significant relationship between physical self-concept of children and sport participation. The results of this study suggested that participants perceived themselves as more competent in sports and games than did non-participants. A Study conducted to investigate the elite and talented young sport participants, found that talented young swimmers had significantly higher physical self-concept (Vallerand, Pelletier, & Gagne, 1991) and female elite gymnasts reported higher levels of general, physical, and cognitive competence and higher levels of self-concept than non-elite gymnasts (Kolt & Kirkby 1993).

In our result indicates sports participating Arts and Science students groups have high Physical and Social self concept than Non-Participating Arts and Science Groups. They perceives themselves more physically strong, healthy and have more friends, they can build relationship easily with others. While Non-participated group have below average self- concept, indicates they perceived themselves less physically strong, not satisfactory views on their body and less self-confidence for playing. The results support the reviews of other related research regarding self-concept and sport participation relationship. However, among the sports participating Arts and Science students among (n= 200), 78 students were observed to have below average Educational self-concept. It means they perceived themselves poor in studies and / or were not interested in studies. Thus, the results of the present study indicate that self-concept specifically physical and social is better in sports participating students and the relationship holds for arts as well as science students.

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SEXUAL MOLESTATION OF WOMEN: BLAME ATTRIBUTION AND SEVERITY OF PUNISHMENT

Vandana Singh* and Pramthesh Pandey**

ABSTRACT

Cases of sexual molestation and eve-teasing are rising day by day but very little effort is made to know what today's youth thinks about it. Sexual molestation is much graver than Eve-teasing but most of the time it is merged with it. This paper tries to explore that on which the blame is attributed in these cases? What are the factors which provokes such incidents? How women can avoid sexual molestation or eve-teasing? What kind of punishment should be given to the accused and how much should it be severe? Sample used in this study were the 30 males and females in the age range of 17 to 25 years of age from Allahabad University. Data were collected with the help of an open ended questionnaires constructed by the researcher itself. Answers given by the participants were analyzed with the help of the method of Content Analysis (Thematic) and it was found that more than 50 % of the participants attributed blames on Females. In the causes it was found that Media (63.33%) and provocative dresses (76%) were considered as playing major role to provoke such cases. Major suggestions which were given to avoid such cases were no late nights (90%), ban on provocative films and websites (66.67%) and Women should carry equipments for the self defense. 100 % of the population accepted that laws are not strict enough to curb such acts therefore amendments should be done and 83% wanted that laws should be implemented strictly. 73.33% participants said that life sentence should be given to the accused in the form of punishment. There was no significant difference in the views of male and female participants.

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Keywords: Blame attribution, Gender discrimination, Nature of punishment, Sexual Molestation, and Sexual harassment

INTRODUCTION

A woman who is an integral part of the society has been subjected to gender discrimination and have always been suppressed. There are various kinds of crimes and atrocities done on them. One of the crimes is Sexual harassment which is an intimidation, bullying or coercion, of sexual nature, or the unwelcomed or inappropriate promise of rewards, in exchange for sexual favours. The word eve-teasing was not used in this research as Eve – referred to first woman "Eve" which means the temptress which shows that the woman is in some way responsible for the behaviour of the perpetrators of this act. Sexual molestation is masked by its deceptive stage name called 'eve teasing'. It disguises sexual harassment and make it appear harmless intention of act (Srinivasan, 1998). Whereas Sexual molestation is a form of sexual aggression that ranges in severity from sexually suggestive remarks, brushing in public places and catcalls to outright groping. Sometimes it is referred to with a coy suggestion of innocent fun, making it appear innocuous with no resulting liability on the part of perpetrators.

Sexual molestation is the most ubiquitous and insidious of all the forms of violence against women. Women in all the fields whether it is public or private is affected by it and it has psychological, medical, social, political, legal and economic implications (Srinivasan, 1998). In India a women is sexually molested after every 26 minute and sexually harassed after every 51 minutes. 91.7% of all inmates of women's hostel and 88.2% of the entire day scholar had faced sexual harassment on the road was reported by Gender study group of University of Delhi in 1996.

This form of a crime is very difficult to prove but it received public and media attention in 1960. After that there were many cases which moved the heart of the people and court and law makers to take some action. In 1998 Sarika Shah Case happened in Chennai in which Eve teasing led to the death of victim. Pearl Gupta in Delhi killed herself in 2007 because of the same. Priyadarshini Mattoo's case in 1996 created a new term stalking which means repeated victimization of the person led to the Sexual assault prevention Bill. Many more incidents were reported later. First Police used to let offender go, then they started giving Murga punishment. In 2008, 19 yrs old youth was punished by distributing 500 handbills showing consequences of indecent act. Then police started taking measures by deploying plain clothed female police officers to have eye on eve teasers. Cases leading to acid throwing made eve teasing a non bail able offence. There are many groups like Nirbhaya Karnataka which has started many programs like blank noise, samvada, vimochana to create awareness and safety programs for the women. In Metros and local trains different lady compartment were made for the benefit of women. In Delhi prohibition of eve teasing bill was also passed.

But all these measures are not able to stop such crimes against women. So, what are the lacunas in the laws? We have seen that these cases are raising day by day and recent case of Guwahati actually led people think that whether humanity is dead or we all have become animals that we cannot feel the pain of other person. Why more than 12 people did not hesitate in sexually assaulting a girl and why nobody came to rescue her? All these questions led the researcher to explore the views of young generation towards eve-teasing or sexual molestation. And it is evident in the previous researches also that if the subjects were asked to consider a hypothetical victim described in an impersonal manner, they were not able to perceive the actual victims and their plight (Barnett et.al., 1991). Therefore Researcher cited the real case study to know about the people's view regarding blame attribution in the case of sexual molestation.

In social Psychology and social problems Blame attribution receives considerable attention from the researcher especially victim blaming. The father of Attribution theory *i.e.* Heider (1958) believed that causes of others' behaviours and circumstances were identified by most of the people who acts as a naïve psychologist. It was proposed by Kelly (1972) that the people who make internal attribution (person's supposed personal characteristics as the cause) and others are there who attribute to external cause (environment and the situation as the cause). Blaming the victim is perceived as fundamental attribution error in which a person overemphasizes personal attributes and discounts environmental attributes (Ross, 1978). So, to find the readily apparent explanation for such hate crimes against women and to determine on whom the blame is attributed by the young generation researcher did this exploratory study.

According to the Jewkes, Sen, Garcia-Moreno (2002), 33% of women with a history of sexual abuse and 15% of women with a physical abuse showed signs of psychiatric disorder. Only 6% of women without a history of physical abuse showed signs of psychiatric disorder. Victims of sexual assault can experience a wide range of physical, psychological and emotional disorders such as shock, anxiety, depression, post-traumatic stress disorder or rape trauma syndrome and other trauma related health issues. Psychological trauma can manifest itself in physical reactions like stomachaches, headaches, back problems. Because of the severity of this issue and the significant implications it has, it is important that research continue on the topic of sexual abuse and molestation. With this knowledge it is imperative that health practitioners, psychologists and social workers continue to expand their knowledge of sexual abuse.

Objective

- To determine blame attribution in the case of sexual molestation.
- To find the causes and factors which provoke such behaviour?
- To determine the ways to escape or avoid such behaviour.

- To determine the nature of punishment for the accused.
- To know whether laws are strict enough to handle such cases.

METHOD

Sample

The aim of this study was to know on whom the blame is attributed on, in the case of sexual molestation. Causes and factors responsible, methods to avoid such things and nature of punishment were also explored. Sample of the study was taken from the Student population of Allahabad University as with the help of review of literature it was perceived that victims and accused were mostly from the young population. Therefore, Purposive sampling method was used to select a sample of 30 males and females in the age range of 17 to 25 years of age from Allahabad University.

Tools

Certain questions were constructed by the researcher to elicit the required data pertaining to the study. The research tool consisted of 5 questions:

- In the case of sexual molestation of women whom do you consider responsible?
- In your opinion what provokes such behaviour?
- Is there any suggestion to avoid or escape such behaviour?
- What should be the nature of punishment for the person who commits such acts?
- What are your views about the existent rules meant to curb such acts?

After data collection *Content analysis* was done:

- Conceptualizing and Categorizing: Blame Attribution, Causes and factors, Suggestions, Nature of punishment.
- Material for analysis: Answers of the questions given in the questionnaire constructed by the researcher itself.
- Recording Units: Themes under the concepts stated above – a single assertion about some subjects.
- Analysis: The data were input by the researcher, using SPSS (version, 16) software. Frequency was determined by counting the number of times category is coded.
- Category: used was Yes/No.

Numbers were quite small to portrait something therefore percentage was used in the analysis.

RESULTS AND DISCUSSION

Table No. I show demographic details of the respondents such as Gender as there are 63.33% of them were females and 36.67% of them were males.

Sexual Molestation of Women: Blame Attribution...

60% of them were in the age group of 17 to 19 years of age. 73.33% of them belong to undergraduate group. All the participants were of Hindu religion. Rural background was represented by 66.7% of the sample and 33.3 were from rural background. 96.7% of the sample represented middle class population.

Table I : Socio Demographic Variables

<i>Socio - demographic</i>	<i>N</i>	<i>%</i>
Gender		
Male	11	36.7
Female	19	63.3
Age		
17 - 19	18	60
20 - 22	7	23.3
23 - 25	5	16.7
Educational qualification		
Undergraduates	22	73.3
Post graduates	8	26.7
Religion		
Hindu	30	100
Background		
Rural	20	66.7
Urban	10	33.3
Socio economic status		
Middle class	29	96.7
Lower class	1	3.3

Table No. II : About Sexual Molestation

<i>BLAME ATTRIBUTION</i>	<i>N</i>	<i>%</i>
Males	11	36.67
Females	16	53.33
Both	7	23.33
No one	3	10
Inclination towards western culture	10	33.33
Irresponsible police and laws	6	20
Society	4	13.33
CAUSES & FACTORS	N	%
Media (Films & Songs)	19	63.33
Internet and mobile	5	16.67
Male dominated mentality	11	36.67
Sexual needs of men	6	20
Provocative dresses	23	76.67
Laws are not strict	30	100
Lack of education/illiteracy	9	30

Table no II shows that most of the participants attributed blame on females (53.33%), and 36.67% of them believed that males were responsible. Westernization of the society was also considered responsible (33.33%) and irresponsible police and laws were also blamed by 20% of them. Society's responsibility constituted of 13.33%. 10% of them said that no one is responsible for the cases of sexual molestation.

In the causes and factors responsible for the sexual molestation of women 100% of the participants considered that laws are not strict enough, therefore accused feel relaxed to commit such crime. Provocative dresses were considered responsible by 76.67% of the participants, 63.33% of them said media (films and songs) are also one of the causes. Male dominated mentality (36.67%), Lack of education (30%), Sexual needs of men (20%), Internet and mobile (16.67%), were some of the causes emphasized by the participants.

Table No. III: Suggestions and nature of Punishment in the case of sexual molestation

<i>Suggestion to avoid or escape</i>	<i>N</i>	<i>%</i>
Women should be careful	7	23.33
Carry equipment of self defense	12	40
Do not befriend strangers	2	6.67
No late nights	27	90
Learn karate and martial arts	4	13.33
Ban on sexually provocative films and websites	20	66.67
Sex education	9	30
Helpline numbers	1	3.33
Moral education for males	19	63.33
Laws should be implemented strictly	25	83.33
Nature of punishment	N	%
Economic, mental and physical punishment	9	30
According to victim's opinion	1	3.33
Marriage with the victim	3	10
Ostracized from the society	4	13.33
Life sentence	22	73.33
Death sentence	7	23.33
10yrs imprisonment	2	6.67
Castration of sexual organs	2	6.67

In table no. III it was found that large number of the participants (90%, N=27) suggested no late nights for the girls to avoid sexual molestation. 83.33% wanted strict implementation of laws. There were also suggestions for ban on sexually provocative films and websites (66.67%). 63.33% of the participants

suggested for moral education for males. There were also suggestions for the women to carry equipments for the self defense (40%), sex education (30%), learn karate and martial arts (13.33%) and they also wanted that women should not befriend strangers (6.67%). 3.33% of the participants demanded helpline numbers for the women.

In the nature of punishment 73.33% wanted life sentence for accused and there were also some of the participants who wanted to give death sentence to them. Ostricization from the society was also suggested by 13.33% of the participants. 10% of them wanted the victim to marry the accused. 6.67% of them said the nature of punishment should be ten years of imprisonment and castration of the sexual organs.

The objective of the study was to explore the views of the younger generation about the blame attribution and severity of punishment in the case of sexual molestation of women. To fulfill the purpose of the study open ended questions were asked to the respondent. This qualitative study explored variety of themes generated under the four main themes of Blame attribution, causes provoking sexual molestation of women, suggestions to avoid such acts, punishment for the accused. The most prominent themes *i.e.* at least generated by half of the sample will be discussed in this section.

Finding under the theme of blame attribution suggested that most of the participants attributed blame on the females which can be supported by Attribution theory (cf. Kelly, 1967) that people blame the perpetrators less when the traditional sex norms are violated by victims for ex. A woman is considered responsible sexual violence against her if she is clearly violating the traditional sex norms as it was also shown in the causes provoking the cases of sexual molestation that late nights and provocative dresses are responsible for such cases. Participants accepted that वेश भूषा का फर्क पड़ता है, क्योंकि छोटे कपड़े पहनने से लडकों का आकर्षण बढ़ता है। महिलाओं का श्रीगार और अंग प्रदर्शन बहुत बड़ा कारण है। Few of them suggested that महिलाओं को खुद अपने पहनावे का ध्यान रखना चाहिए और रहन सहन की सही तरीके से रखना चाहिए तथा बहार माता पिता के साथ जाना चाहिए।

This kind of blame attribution can also be explained with the help of Lerner's "Just world theory" (Lerner, 1965, Lerner & Simon, 1966) where it is posited that the world is largely a safe and fair place to live in, therefore to make the perceiver believe in the just world individual's action is blamed. Those who believe in just world are more inclined to believe that 'good things happen to good people' and 'bad things happen to bad people'. Therefore these individuals believe that if others are in trouble, it is because of their own fault.

Males were also blamed by many of the participants. For *e.g.* पुरुष प्रधान समाज जिम्मेदार है महिलाओं के उत्पीड़न के लिए लडकों को दी गयी छुट भी जिम्मेदार है। स्त्रियों को केवल भोग की वस्तु समझा जाता है इसलिए जरूरत है पुरुषों की सोच बदलने की।

Most of the participants also considered westernization of the society responsible for such cases. Irresponsible police and law are also blamed for the atrocities against women which could be explained by the component of motivation in Bandura's theory of modeling as when perpetrators look at the previous cases and not much action has been taken against accused; it encourages them to commit the crime.

In the themes under the causes and factors provoking such cases it was found that on the first place media (film and songs) are the main causes as explained by the Bandura's Modeling theory as in the films it is shown that hero starts flirting with the girl and then ends up with the love story between them. अभद्र चलचित्रों का प्रमुख रूप से कारक माना जा सकता है।

All of them said that laws are not strict enough for e.g., ऐसे कृत्यों को रोकने के लिए न जाने कितने नियम हैं पर इन नियमों का पालन कड़ाई के नहीं होता। प्रशासन इन घटनाओं को गैर जिम्मेदाराना ढंग से लेती है। इसे रोकने के लिए हमारे नियम बड़े ही शिथील हैं। And more than half of them said that provocative dresses are responsible. In the previous researches it is proved that the dresses which women wear if it indicates that in some way they are asking for sex anyway it is responsible for the sexual violence against them is the most prevalent rape and sexual harassment myth. In this research also this myth seems to be prominent among youngsters. Still there is need to do more research on the attire of the victim to see how it affects the perception of sexual assault. In the previous researches also it was also seen that the women who dress themselves in revealing cloths are judged harshly and more promiscuous than who do not. Moreover, it is a common assumption that women should restrict their behaviour according to the societal norms of 'respectable femininity' (for ex. Dress up properly, do not go out unaccompanied during late night) to avoid male desires and prevent such atrocities against them (Griffin, 1971; Roger and Gordon, 1979).

In suggestions participants demanded for ban on films as in WHO's guidelines to avoid violence against women it is prescribed that everyone should avoid buying music and films that glorifies sexual violence and objectification of women and girls as objectification theory suggest that implicit or explicit sexual objectification of the female body can lead to negative consequences for them (Fredrickson and Roberts, 1997) (cf. Calogero, 2004). Moral education for the boys to treat all the women and girls with respect and laws should be implemented strictly and no late nights for girls were some more suggestions to avoid sexual molestation.

In the nature of punishment more than half of the participants suggested for life sentence. Fieldman & Summers (1976) found that females perceive the

sexual assault of women to be more serious crime and recommend longer jail sentences for the perpetrators. Majority of the participants advocated for life imprisonment आजीवन कारावास की सजा देनी चाहिए। few of them also suggested castration of sexual organs, death sentence and other punishments. As Non random sampling method was used and sample was smaller in number therefore the result cannot be generalized on the larger population. Intensity and space, time analysis was not used in the content analysis, otherwise a better picture could have been obtained. Inter coder reliability which means the degree to which different coders assign the same code to the segment of the text was also not analyzed.

IMPLICATIONS

Information provided in the paper can help reform policy and intervention directed at eve teasing and sexual molestation. Chairman and all the political leaders can be in relief as the causes or factors which they consider responsible were prominent in the result also. There are areas which can be explored in further researches like Methods of molestation, who are the molesters? Victim's reaction, on whom victims can rely? Consequences and effect, Coping strategies of the victims. These areas could be explored in further researches to understand this serious crime against women.

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IMPACT OF PRANAYAMA ON POSITIVE SELF-EVALUATION DIMENSION OF GENERAL MENTAL HEALTH AMONGST REGULAR AND CASUAL PRACTITIONERS

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ABSTRACT

The cardinal objective of the present study was to understand the Impact of Pranayama on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners structure of set of variables viz. Gender, Types of Pranayama and Regularity of practice on Positive Self-evaluation dimension of General Mental Health in dimension of General Mental Health. A purposive sample of 360 Literate Regular and Irregular Pranayama Practitioners from across diverse data with balanced number of Males and Females (25 to 60 years) was selected from Patanjali Yogapeeth, Haridwar and Yoga/Pranayama shivara organized in NCR and Rajasthan to sample the variables Gender Type of Pranayama, Regularity of Practice, General Mental Health (Positive Self-evaluation), and Regularity of Practice. Mental Health Inventory (Jagdish and Srivastava, A.K., 1983) was used. SPSS 17.0 was employed to compute 2x2x2 ANOVA to see the Effect of Pranayama on Positive Self-evaluation dimension of General Mental Health of Regular and Casual Practitioners to investigate the main effect of Gender (Male and Female) on Positive Self-evaluation dimension of General Mental Health in Regular and Casual Practitioners. The results obtain reveals significant main effect of Type of Pranayama and Regularity of Practice on Positive Self-evaluation dimension of General Mental Health. The results are discussed in the light of existing literature.

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Keywords: Casual Practitioners, Pranayama, Regularity of practice, Type of Pranayama, and Self-evaluation.

INTRODUCTION

According to the Yoga system, our breath is part of the cosmic energy (*prana*). The breath supplies motive power to all the parts of the body. When the breath is regulated and made rhythmic, the mind becomes calm. The first sign of an uncontrolled mind is irregularity of breathing. But *Pranayama* in a deeper and truer sense is much more than just control and regulation of breath. The Sanskrit *Pranayama* is a compound word consisting of *prana*, which means vital force, and *ayama*, which indicates restraint. *Prana* is therefore not just breath; it is cosmic energy. Breath is the gross manifestation of *prana*, which is subtle. Just as we are immersed in air, so we are immersed in *prana*. When we breathe in air, we are taking in both air and *prana*. *Prana* is ever awake and ever active in us.

Prana is described in the sacred texts of Yoga and Vedanta as having five modifications, according to its five different functions. The names of the five modifications are *prana*, *apana*, *samana*, *udana*, and *vayana*. The function of *prana* is respiration; of *apana*, excretion; of *samana*, digestion; of *udana*, swallowing of food, helping in sleep, and also separating the subtle body from the physical body at the time of death; and of *vyana*, circulation of blood. The seat of *prana* is the heart; of *apana*, the organs of evacuation; of *samana*, the area of the navel; of *udana*, the throat; while *vyana* is all-pervading and moves throughout the body, guarding it against disease and maintaining equilibrium.

Prana is the manifestation in each of us of the Cosmic Life Force. Through the physical act of breathing, the life force within each of us is in constant contact with the cosmic life force. Without our knowledge or conscious effort, the physiological process of inbreathing and out breathing is going on continuously day and night, during waking and sleeping. By exercising control over our breathing, we can control *prana*. Control of *prana* leads to control of the mind, because without *prana* the mind ceases to vibrate and comes to a standstill.

Pranayama forms an important part of the disciplines of Yoga for controlling the mind and awakening the spiritual consciousness. We have seen that according to Yoga, the mind never becomes controlled unless it is controlled consciously, and this must be achieved by controlling the effects of the mind's restlessness. As we know, the restlessness of the mind is reflected in the restlessness of the body, the speech, and especially the breathing. So through fixed posture, observance of silence, and practice of *Pranayama*, the three effects are overcome.

Pranayama is known to improve pulmonary function (Malhotra and Singh, 2002) and cardiovascular profile (Singh et al, 2004; Harinath, Malhotra, Pal, Prasad, Kumar, Kain, Rai, Sawhney, 2004). A Buteyko breathing device, which mimics *Pranayama*, was shown to improve symptoms and reduce bronchodilator use in asthma patients. *Pranayama* has also been shown, over time, to reduce

oxygen consumption per unit work. "Kapalabhati", a fast breathing *Pranayama* technique, has been shown to promote decarboxylation and oxidation mechanisms in the lungs which is believed to "quiet" the respiratory centers. Alteration in information processing at the primary thalamocortical level inducing modification in neural mechanisms regulating the respiratory system may contribute to *Pranayama*'s beneficial pulmonary effects. In studies that examined *Pranayama* as a form of exercise, nostril breathing was shown to increase hand grip strength of both hands. *Pranayama*, by reducing risk factors associated with cardiovascular disease, has shown that it is not only therapeutic but also preventative. Reduction in oxidative stress levels with increased superoxide dismutase and decreased number of free radicals may explain in part the beneficial long-term impact *Pranayama* has on the cardiopulmonary system.

Pranayama is known to increase neural plasticity and to alter information processing making it a possible treatment for psychological and stress disorders or improving one's psychological profile (Harinath et al, 2004; Brown and Gerbarg, 2005). Higher improvement in IQ and social adaptation parameters were noticed in mentally retarded children after yogic training including *Pranayama* (Uma, Nagendra, Nagarathna, Vaidehi, and Seethalakshmi, 1989). Sudarshan Kriya Yoga, which includes *Pranayama*, has been used as a public health intervention for treatment of post traumatic stress disorder, depression, stress related medical illnesses, substance abuse, and rehabilitation of criminal offenders for its ability to enhance well being, mood, attention, mental focus, and stress tolerance (Brown and Gerbarg, 2005). In conjunction with other yogic techniques, *Pranayama* has been shown to decrease symptoms of irritable bowel syndrome by enhancing parasympathetic activity of gastrointestinal tract and by reducing effects of stress (Taneja, Deepak, Poojary, Acharya, Pandey, Sharma, 2004). It has been mentioned as a possible treatment for symptoms of epilepsy (Yardi, 2001) and has been shown to increase plasticity of motor control indicating that it might have applications in rehabilitation programs.

Different forms of *Pranayama* activate different branches of the autonomic nervous system effecting oxygen consumption, metabolism and skin resistance. *Pranayama* breathing, characterized by brief breath retention, caused significant increases in oxygen consumption and metabolic rate while *Pranayama* breathing, characterized by long breath retention, caused lowering of oxygen consumption and metabolic rate (Telles and Desiraju 1991). This demonstrates that slow breathing enhances parasympathetic activation. In another study using breathing exercises mimicking *Pranayama*, slow breathing over a period of three months was shown to improve autonomic function while fast breathing did not have an effect on the autonomic nervous system (Pal, Velkumary and Madanmohan, 2004). Slow breathing *Pranayama* exercises show a strong tendency of improving or balancing the autonomic nervous system through enhanced activation of parasympathetic nervous system. In contrast to slow *Pranayama* breathing, nostril

breathing, both through right nostril, left nostril, and both nostrils, has been shown to increase baseline oxygen consumption indicative of sympathetic discharge of the adrenal medulla (Telles, 1994). Contradictorily, left nostril breathing has been shown to increase volar galvanic skin resistance interpreted as a reduction in sympathetic nervous activity. Although nostril breathing and short *Pranayama* breathing practices are capable of altering the autonomic nervous system, more research is required to fully understand their clinical benefits. *Pranayama* may also affect the immune system. Inhibition of the sympathetic nervous system has been shown to enhance function of the immune system in several forms of meditation including mindfulness meditation, Qigong, and Transcendental meditation (Lee, Huh, Jeong, Lee, Ryu, Park, Chung, Woo, 2003; Takahashi, Murata, Hamada, Omori, Kosaka, Kikuchi, Yoshida, Wada, 2005). Since *Pranayama* has been shown to shift the autonomic nervous system away from sympathetic dominance (Pal, Velkumary, and Madanmohan, 2004) it is probable that *Pranayama* may have beneficial immune effects similar to meditation. More studies are needed to elucidate the direct effect of *Pranayama* on immune function.

Objective

The prime objective of the present study was to see the main and interactive effect of *Pranayama*, Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*), Regularity of Practice (Regular and Casual), Gender (Male and Female) and Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*), Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual), Gender (Male and Female) and Regularity of Practice (Regular and Casual) and Gender (Male and Female), Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.

Hypotheses

- H₁ Gender (Male and Female) will have significant main effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.
- H₂ Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) will have significant main effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.
- H₃ Regularity of Practice (Regular and Casual) will have significant main effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.
- H₄ Gender (Male and Female) and Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) will have significant interactive effect on Positive

Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.

- H₅** Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) will have significant interactive effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.
- H₆** Gender (Male and Female) and Regularity of Practice (Regular and Casual) will have significant interactive effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.
- H₇** Gender (Male and Female), Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) will have significant interactive effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.

METHOD

Sample

A purposive sample of 360 literate *Pranayama* practitioners from across diverse strata with balanced number of Males and Females (age range 25-60 years) was selected for the present study. These *Pranayama* Practitioners were selected from Patanjali Yogpeeth, Haridwar and from various Yoga/*Pranayama* shiviras organized in Delhi and various cities in Rajasthan under the aegis of Yoga Guru Swami Baba Ram Dev and/or Patanjali Yogpeeth. Out of these 360 *Pranayama* Practitioners; 180 of them were practicing *Anuloma-Viloma Pranayama* and the remaining 180 were practicing *Kapalabhati Pranayama* since last 2 years with each respective category having balanced number ($N = 90$) of Regular and Casual Practitioners. The Regular Practitioner was operationally defined as the one who practiced the respective type of *Pranayama* daily at least for half-an-hour minimum and the Casual Practitioner was deemed to be the one who practiced the respective type of *Pranayama* only once in a fortnight for half-an-hour.

Tools

- 1. Mental Health Inventory (MHI) (Jagdish and Srivastava, A.K., 1983):** It has been designed to measures mental health of normal individual of it consist of 56 items in the final format the reliability coefficients of its 6 dimension positively self-evaluation, perception of Reality, integration of personality, anatomy, group-oriented attitudes. Environmental mastery and .75, .71, .72, .72, .74, .71, and .73 respectively. The concurrent validity of the scale was found to be .54.

Research Design

As the Independent Variables under study had already occurred and were inherently non-manipulative, the study being an Ex Post Facto research; so the

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Research Design for the proposed study was a $2 \times 2 \times 2$ factorial one. The following variables were used:

Independent Variables

- Gender (Male and Female)
- Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*)
- Regularity of Practice (Regular and Irregular)

Dependent Variables

- Positive Self-evaluation dimension of General Mental Health

RESULTS AND DISCUSSION

In order to investigate the significance of main effects of Gender (Male and Female), Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) on Positive Self-evaluation dimension of General Mental Health, the $2 \times 2 \times 2$ ANOVA with equal cell frequencies was computed to explain the partition of variance. The Table 1 reflects that Gender (Male and Female) has no significant main effect ($F = .10$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_1 i.e. Gender (Male and Female) will have significant main effect on General Mental Health in Regular and Casual *Pranayama* Practitioners in the followers of Swami Baba Ram Dev stands rejected specifically with respect to Positive Self-evaluation dimension of General Mental Health and rival/alternative hypothesis is tenable. It is also observed that Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) has significant main effect ($F = 14.96$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_2 i.e. Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) will have significant main effect on General Mental Health in Regular and Casual *Pranayama* Practitioners in the followers of Swami Baba Ram Dev stands accepted at 0.01 level of confidence specifically with respect to Positive Self-evaluation dimension of General Mental Health dimension and rival/alternative hypothesis is not tenable. It is also observed that Regularity of Practice (Regular and Casual) has significant main effect ($F = 3.85$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_3 i.e. Regularity of Practice (Regular and Casual) will have significant main effect on General Mental Health in Regular and Casual *Pranayama* Practitioners in the followers of Swami Baba Ram Dev stands accepted at 0.05 level of confidence specifically with respect to Positive Self-evaluation dimension of General Mental Health and rival/alternative hypothesis is not tenable.

In order to investigate the significance of interactive effects of Gender (Male and Female) and Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*), Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual), Gender (Male and Female) and Regularity of Practice

(Regular and Casual) & Gender (Male and Female), Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) on Positive Self-evaluation dimension of General Mental Health in dimension of General Mental Health, the 2x2x2 ANOVA with equal cell frequencies was computed to explain the partition of variance.

Table 1: F-ratios for a 2x2x2 ANOVA for Positive Self-evaluation (General Mental Health)

Source of Variance	df	Sum of Squares	Mean Squares	F	Level of Significance
Main Effects-					
Gender	1	6.67	6.67	0.10	NS
Type of <i>Pranayama</i>	1	1016.74	1016.74	14.96	S(0.01)*
Regularity of Practice	1	261.80	261.80	3.85	S(0.05)**
Interaction Effects-					
First order Interactions-					
Gender x Type of <i>Pranayama</i>	1	2.03	2.03	0.03	NS
Type of <i>Pranayama</i> x Regularity of Practice	1	3.80	3.80	0.06	NS
Gender x Regularity of Practice	1	0.07	0.07	0.01	NS
Second order Interactions-					
Gender x Type of <i>Pranayama</i> x Regularity of Practice	1	0.03	0.03	0.01	NS

*Significant at 0.01 level.

** Significant at 0.05 level

The Table 1 reflects that Gender (Male and Female) and Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) has no significant interactive effect ($F=0.03$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_4 i.e. Gender (Male and Female) and Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) will have significant interactive effect on General Mental Health in Regular and Casual *Pranayama* Practitioners in the followers of Swami Baba Ram Dev stands rejected specifically with respect to Positive Self-evaluation dimension of General Mental Health and rival/alternative hypothesis is tenable. It is also observed that type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) has no significant interactive effect ($F=0.06$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_5 i.e. type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) will

have significant interactive effect on General Mental Health in Regular and Casual Pranayama Practitioners in the followers of Swami Baba Ram Dev stands rejected specifically with respect to Positive Self-evaluation dimension of General Mental Health and rival/alternative hypothesis is tenable. It is also observed that Gender (Male and Female) and Regularity of Practice (Regular and Casual) has no significant interactive effect ($F=0.01$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_6 i.e. Gender (Male and Female) and Regularity of Practice (Regular and Casual) will have significant interactive effect on General Mental Health in Regular and Casual Pranayama Practitioners in the followers of Swami Baba Ram Dev stands rejected specifically with respect to Positive Self-evaluation dimension of General Mental Health and rival/alternative hypothesis is tenable. It is again observed that Gender (Male and Female), Type of Pranayama (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) has no significant interactive effect ($F=0.01$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_7 i.e. Gender (Male and Female), Type of Pranayama (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) will have significant interactive effect on General Mental Health in Regular and Casual Pranayama Practitioners in the followers of Swami Baba Ram Dev stands rejected specifically with respect to Positive Self-evaluation dimension of General Mental Health and rival/alternative hypothesis is tenable. The results are vindicated by the studies of (Cowen, 2010; Takahashi et al, 2005; Pal, Velkumary, and Madanmohan, 2004; Salmon, Lush, Jablonski & Sephton, 2009; Kail, & Cavanaugh, 2007; Bhardwas, et al, 2013; Madnawat, Bhardwas and Bhardwas, 2013; Bhimani, Kulkarni, Kowale and Salvi, 2011).

LIMITATIONS & SUGGESTIONS

- The purposive sampling employed curbs the generalizability of results and hence limits the prediction of parameters of entire yogic population.
- Due to lack of control in post-hoc situations, it cannot be ensured that Pranayama practitioners (*Anuloma-Viloma/Kapalabhati*) did it in homogenous and precisely standardized manner.
- The researcher should have avoided Gender as independent variable (Factor) as it is parameter dependent.
- The error variance might have crept in results obtained and fidelity compromised because Yoga Guru Baba Ram Dev in his shiviras only delivers yogic instructions but also mixes it with temporal socio-political discourses. Such breaching of "MaxMinCon Principle" may confabulate the results.

The patterns of mean differences in the interaction variances between $A \times B$, $A \times C$, and $B \times C$ variables as observed in the analysis of $2 \times 2 \times 2$ ANOVA on measures of the dependent be highlighted by applying post hoc mean comparisons.

As having least significant difference (LSD) for pair wise comparison between various levels. Significant ANOVA makes no attempt to control the type-I error. It's here remembered to use Bonferroni's and Tukey's tests to control the type-I error rate effectively. Here Tuckey's test is more powerful because here testing involves large number of means ($N > 20$). Besides the Ryan, Einor, Gabriel, Welsch Q Procedure (REGWQ) has good power and tight control of the type-I error rate. The future researches should take serious note of this fact.

Implications

Yoga is much more than a fitness program for the body and the mind. It can have deep emotional, social and spiritual implications in one's life. But, these aspects of yoga are almost never spoken about in mainstream media. Perhaps the reason for this is that such claims can hardly be verified in a scientific laboratory and because these results are unquantifiable, it is difficult to assess their value in our lives. And, since every individual experience is likely to be unique, it is hardly possible to draw generalized conclusion from them. This is why you almost never hear about how yoga can impact our day to day life and our overall experience of being alive. It is possible to make yoga one's way of approach to life.

The studies on Yoga especially *Pranayama* have serious ramifications for health, happiness, hope, harmony, serenity, peace and blessedness. It will not only render yogic tradition on firm scientific footings but also universalize the Indological ancestral wisdom to the denizenry at large. Yoga and specially *Pranayama* are beneficial for comprehensive bio-psychosocial and spiritual health in a significant positive manner, not just curing the diseases. So Yoga and *Pranayama* can act as an effective deterrent against the onset of various disease and dysfunctions. As a primary prevention technique, Yoga and *Pranayama* are more relevant in developing countries lacking psychiatric infrastructure. It's also important in the Western world living in cubical, cultural, carpentered environment and 'Age of Anxiety'. The utopia of Alma Ata Conference aspiring Health for all can only be realized by resorting to yogic practice; this is not only preventive, curative and cost-effective therapeutic tool but also a major regime for spiritual health. The health care needs of all can only be addressed by Yoga and *Pranayama*. Last but not least, the practice of Yoga and *Pranayama* will meaningfully support the heralding of a new psychocivilization in the age of perpetual conflict labeled as 'Electro-oligarchy vs. Psychocivilization' by Delgado.

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LIFE SATISFACTION AND MENTAL HEALTH OF AGED WITH REFERENCE TO NORTH BIHAR

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ABSTRACT

The present investigation was undertaken to study the perceived life satisfaction and mental health of 60⁺ aged with particular reference to North Bihar. Total sample (N=200) comprising men (n=100) and women (n=100) were selected randomly from different area of locality of North Bihar. In this study the cities given priority for data collection were Darbhanga, Samastipur, Madhubani, Begusarai and Muzaffarpur. Life satisfaction Scale and Mental Health inventory were administered by contacting the subjects personally. Results revealed that life satisfaction was a function of mental health for both the group of aged men and women as positive correlations have been found. A significance of difference was also been found in terms of life satisfaction and mental health (dimensions-wise and overall) between the group of aged men and women, although, both the group have shown favourable inclination towards the degree of perceived reactions of life satisfaction. On the other hand, results also revealed that aged men had a higher degree of life satisfaction than aged women especially from where the sample has been drawn to undertake. The discrepancy in the results has been discussed in the light of exigency of situations prevailing in North Bihar.

Keywords: Life satisfaction, Mental disorders. Mental health,

INTRODUCTION

In the fast changing human spheres of life everything is undergoing a change, however, aging remains a matter of discussion not only in our own nation – India but throughout the globe. It is generally observed that life satisfaction is beneficial

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for mental health of men and women both and it results in lower risk of mental disorders such as anxiety, depression and substance abuse. Thus, it is now a well-established fact that life satisfaction and mental health go hand in hand. No doubt supportive relationships confer substantial mental health benefits. Similarly, the state of mental health of a person is presumed to be directly related to the understanding, love and trust which the person enjoys with his/her spouse.

By looking at the facts, present enquiry was aimed at studying the perceived life satisfaction and mental health of 60⁺ aged (men and women) with particular reference to North Bihar. The sample chosen for the present research work as it is still unexplored sample area hence, the area covered by present investigators is of utmost value and needs some special attention, not only of researchers but union and state governments too for the needful solutions of aged.

Life satisfaction is the way a person perceives how his or her life has been and how they feel about where it is going in the future. It is a measure of well being as well as a cognitive, global judgment. It is having a favourable attitude to one's life as a whole. Life satisfaction has been measured in relation to economic standing, amount of education, experiences, and the place of residence.

The terms life satisfaction, morale and happiness are often used interchangeably referring to psychological well-being of the individual. It is important to be mentioned that psychological well-being includes mental functioning such as happiness, morale, life satisfaction, and the absence of psychopathology (*e.g.* depression). George (1981) viewed life satisfaction as a cognitive process by which an individual assesses his/her progress towards desired goals. In addition to this George also defined happiness as "transitory moods of gaiety reflecting the affect that people feel toward their current state of affairs". Although, it is generally observed that all motivational spheres of life contribute a lot to an individual's life satisfaction which provides all round capacity with commitment of work and family too. An important study conducted by Neugarten, Havighurst and Tobin (1961), showed that zest, resolution and fortitude, congruence between desired and achieved goals, positive self-concept and mood constitute the psychological concept of life satisfaction. Palmore and Kivelt (1977) reported that the best predictor of life satisfaction is the person's ratings of life satisfaction in the past and that initial values or changes in other variables appeared to be unrelated to changes in life satisfaction. Moreover, Taves and Hansen (1962) point out that health problem appear to detract from enjoying a number of close friendships, satisfaction with work, and satisfaction with family, whereas, various researches have shown that life satisfaction may also affect health when a person is dissatisfied with life, it means that an individual is experiencing negative emotions that are colouring his/her view of the world around him/her. There may be a relative lack of positive feelings states. Such dissatisfaction means important needs and expectations are not being met (Lawton, 1983).

A lot of researches on life satisfaction have been conducted so far and it has been found that happiness in old age depends to a great extent upon busy life, good health, absence of the feeling of paucity of funds and having spouse and social context which is witnessed from Anantharaman's (1979) study that investigated interrelations among adjustment – related factors in old age. In this study a positive correlation between activity and adjustment was found. Results showed that adjustment is positively related to education, occupation, income and social class. Self-rated physical/mental health and adjustment in life was also found positively related. Thus, life satisfaction among the aged is a function of several interrelated factors of adjustment. Harris (1975) presented both positive and negative statements on life satisfaction. In his study vast majority found that their past lives were satisfying; they had received what they expected out of life. The large difference was observed in terms of future. The aged were much less likely to have made plans for the future or to expect interesting and pleasant things to happen in the future, although, Medley (1976) gave a model depicting a causative chain between financial situation, health satisfaction with standard of living, satisfaction with family life and satisfaction with life as a whole. In this study, satisfaction with family was found to make the greatest impact on life satisfaction. Recently, Ahmad and Ahmad (2009) studied perceived life satisfaction of the aged university employees and found significance of difference between working employees and retired employees. It is very interesting to note that in their study both the group of employees have indicated favourable inclination towards their life satisfaction but working elderly employees were found to have higher life satisfaction than their colleagues who have retired from their job.

Review of literature shows that there are two approaches to life satisfaction. The first focuses upon the overt behaviour of the individual and uses social criteria of success or competence. The second approach is to be viewed from an individual's own internal frame *i.e.* the individual's own interpretation and evaluation of his/her present or past life, and his/her satisfaction/happiness with regard to mental health.

The concept of Mental Health is as old as human beings. Mental health refers to those behaviours, perceptions and feelings that determine a person's overall level of personal effectiveness, success, happiness and excellence of functioning as a person (Kornhauser, 1965).

Thus, the concept of mental health takes a 'Gestalt' view of the individual. It incorporates the concepts of personality characteristics and behaviour all in one. A mentally healthy person shows a homogenous organization of desirable attitudes, healthy values and righteous self-concept and scientific perception of the world as a whole. Mental health, however, is a contested and still much debated concept among psychologists and other behavioural scientists, with no universally accepted (Herron and Trent, 2000; Friedli, 2004; Warr, 1987) definition due to

the fact that mental health is multidimensional and value-laden. Several eminent psychologists namely, Erickson (1936), Rogers (1969) and Hurlock (1972) have expressed their ideas in the same way. A mentally sound or healthy person is viewed as a dynamic and conscientious person who is found to be reasonably rational in the choice of means for the realization of his/her pious ends (Anand, 1988). Hence, mental health is an attitudinal concept toward ourselves and others (WHO, 2005). It also presents a humanistic approach towards the understanding and assessment of the self positive feelings, attitudes towards self and others.

The term mental health has been categorized into two different broader categories known as positive and negative mental health. Mental health from the positive angle refers to behaviour, attitudes and feeling that reflect an individual's level of personal effectiveness, success and satisfaction. According to Argyris (1951), persons with positive mental health should have the ability to understand the realities which exist both externally and internally when he/she strives to be aware of oneself. It is also important to be mentioned that mentally healthy persons are able to fulfill their social roles successfully. They enjoy peace of mind, happiness, self-confidence and others' companionship, whereas, negative mental health covers a wide variety of deep feelings including sorrow, disappointment, anger and empathy etc. (Emmons, 1992). O'Neill and Zeichner (1985) found that stress in the work environment has a negative impact on the physical and mental health of working women. Rastogi and Kavita (2001) found a significant negative relationship between occupational stress and mental health. Similarly, in an important study conducted by Johns, Sutton and Webster (1989) it was found that mental health is a condition of the characteristics of the average person who meets the demands of life on the basis of his/her own capacities and limitations. Lately, Ahmad (2013) studied mental health among private and government school teachers up to and found that private school teachers possess sound mental health as compared to government school teachers. Recently, the field of Global Mental Health has emerged as the area of study, where research and practice places a priority on improving mental health and improving quality in mental health for all people worldwide (Patel and Prince, 2010).

Review of literature on life satisfaction and mental health, showed that extensive researches have been conducted separately but none of the study of life satisfaction in relation to mental health of aged, especially in Indian context. Hence, the present study aimed at studying life satisfaction in relation to mental health of aged with particular reference to North Bihar. It is important to be mentioned here that the area of sampling chosen by the present investigators is yet unexplored area so; the findings of the study will definitely fill the void of knowledge in the area concerned. On the basis of broad objectives of the present study the following hypotheses were formulated:

1. There will be no significance of difference between aged group of men and women in terms of their degree of perceived life satisfaction.
2. There will be no significance of difference between aged group of men and women in terms their mental health (dimension-wise and overall).
3. Life satisfaction will not be a function of mental health among aged men and women.

METHOD

Sample

The present study was carried out on two hundred (N=200) 60⁺ aged men (n=100) and women (n=100). All the subjects included in the sample were contacted personally from different area of North Bihar. Major cities of North Bihar were given priority for the present piece of research work namely, Darbhanga, Madhubani, Samastipur, Begusarai, Sitamarhi and Muzaffarpur.

Tools

The following materials were used for the study:

1. *Life satisfaction scale* (Chadha & Van Willigen, 1995) :The scale consisted of 27 items based on Likert type 7-point scale in which 12 items are scored in reverse order i.e. 7 to 1 (for strongly disagree to strongly agree). In this scale higher score indicates high life satisfaction. This scale has been standardized by the author on Indian population and it has the split-half reliability of 0.87 and also has the face content and predictive validity of 0.82 which confirms the efficacy of the scale.
2. *Mental health inventory* (Jagdish and Srivastava, 1996): The inventory consisted of 56 items and each item was rated on 4 – point rating scale ranging from always to never with a score of 1 to 4. Inventory comprises of six dimensions such as, Positive self-evaluation (PSE), Perception of reality (PR), Integration of Personality (IP), Autonomy (A), Group Oriented Attitude (GOA), and Environmental Mastery (IM). In this scale high score indicates good mental health and low score indicates poor mental health. The reliability coefficients of different dimensions of mental health inventory were found to be more than 0.70 and moreover, the reliability coefficient of overall inventory was found 0.73 which confirms the efficacy of the inventory.
3. *Biographical information blank* (BIB). It includes personal information such as qualification, age, marital status, religion, sex, number of dependents, experience in the present position, income, etc.

Procedure

The above mentioned materials was administered individually to the sample to obtain the data and during data collection subjects were assured that the information provided by the on each items of the scales will be kept strictly confidential and will be used for research purposes only.

RESULTS AND DISCUSSION

The mean scores on life satisfaction and the comparison of the means of males and females has been shown in Table 1.

Table 1: Significance of difference in Life Satisfaction of aged men and women

Groups	Mean	SD	t- value	P
Men (n=100)	144.48	23.79	3.39	0.01
Women(n=100)	132.39	26.38		

The results obtained in terms of perceived life satisfaction reveal a clear cut picture regarding the significance of difference between the group aged men and women as the obtained t- value (3.39) has been found significant at 0.01 level. Hence the proposed hypothesis *i.e.* there will be no significance of difference between the group of aged men and women stands rejected.

Table 2: Levels of Perceived Life Satisfaction of aged Men and Women

Levels	Men		Women	
	N	Percentage	n	Percentage
High	46	46%	38	38%
Moderate	36	36%	42	42%
Low	18	18 %	20	20 %

Percentages of aged men and women's in terms of level of perceived life satisfaction were also computed. It is witnessed from the Table 2 that 46 percent of aged men have higher degree of life satisfaction in comparison to 38 percent aged women. While 36 percent of aged men have moderate level of perceived reactions to life satisfaction, 42 percent of aged women have shown moderate level of life satisfaction which is comparatively higher than that of aged men. Moreover, 18 percent of aged men had low level of life satisfaction in comparison to aged women *i.e.* 20 percent. Thus it is evident that higher life satisfaction was reported by a larger percent of men in comparison to women.

The Means, SDs and t-values (Dimension-wise and its total) between of aged men and women on Mental health have been shown in Table 3.

Table 3: Means, SD and t-values on Mental Health of aged men and women

Dimensions of Mental Health	Men (n=100)		Women (n=100)		t-values
	Mean	SD	Mean	SD	
Positive self-evaluation	29.3	2.14	31.8	2.78	7.10*
Perception of reality	23.8	1.88	19.5	1.75	16.60*
Integration of personality	33.4	5.23	30.4	2.78	5.04*
Autonomy	18.8	1.68	16.5	1.73	9.47*
Group - oriented attitudes	28.9	1.63	26.3	1.67	11.06*
Environmental competence	26.9	2.85	24.4	2.28	6.81*
Overall Mental Health	161.1	15.41	148.9	12.19	6.02*

* $p < 0.01$

It is clear from the above table that the difference in the mean scores of both group have been found highly significant at .01 level of confidence on certain dimensions of mental health and overall score as the t-values for positive self-evaluation (7.10), perception of reality (16.60), integration of personality(5.04), autonomy(9.47), group orientated attitudes (11.06), environmental competence(6.81), total mental health (6.02) were found to be statistically significant. Hence, the hypothesis formulated that there will be no significance of difference in terms of the different dimensions of mental health and considering all, stands rejected.

Table 4: Relationship between Life Satisfaction and mental Health of aged Men and Women

Variable	Men		r	Women		R
	Mean	SD		Mean	SD	
Life Satisfaction	144.48	23.79	.87	132.39	26.38	.79
Mental Health	161.1	15.41		148.9	12.99	

Correlations were computed between the two variables, i.e. life satisfaction and mental health of aged men and women. Results show that there is positive relationship between life satisfaction and mental health as the correlation values $r = .87$ and $r = .79$ respectively has been found significant at .01 level of confidence for both the group of aged men and women Thus, the hypothesis that life satisfaction will not be function of mental health for aged men and women also stands rejected.

In the light of the results obtained, it is important to point out that all the elderly of North Bihar belonging to Darbhanga, Samastipur, Madhubani, Begusarai and Muzaffarpur have shown quite favourable inclination towards their degree of life satisfaction. This is evident from the fact that they scored above average

on the life satisfaction scale, although, aged men scored higher in comparison to aged women (Tables 1 & 2). The present results seem to be quite logical as socio-cultural milieu of whole North Bihar is still traditional and modernization has not has an impact. Thus, all the elderly have shown favourable satisfaction towards his/her life. During the investigation it was observed that children were very much supportive and cared for the elderly. The children were educated and involved in different jobs and most of them were self-employed and catered to the needs and demands of the family. It may be the cause to have favourable degree of life satisfaction for both the group of men and women.

Apart from the above discussion, it is pertinent to be mentioned here that aged women have comparatively shown low life satisfaction than men. Basically they want their children always be with them so we can say that aged women always suffer from temperamental poverty especially from where the present sample has been drawn and moreover lack of family members support as well but instead of these aged women also scored above higher degree on the life satisfaction score. Really they deserve a lot of credit in there whole life endeavor. The results presented here seem to be logical in the sense that male are always realistic and female are not. Aged women are away from naturalism because mirror reflexion is not there and it is due to seclusion.

Discussing the results of the results of the Table 3 regarding mental health (dimension wise and total) of aged men and women it could be observed from the table that on each dimension of mental health – positive self evaluation, perception of reality, integration of personality, autonomy, group oriented attitudes, environmental competence and over all mental health have been found statistically highly significant at .01 level of confidence where the mean scores of males are higher than females except on positive self evaluation. The result also seems to be logical in the sense that mental health as prevention and preservation provides opportunities are more for men in comparison to women, therefore they cultivate desirable attitudes and make adequate adjustment in various life situations. Moreover it has been experienced during the inquiry for the present piece of research work found that the aged (men and women) suffers many frustrations in his or her daily life experiences. They are dependent on others for the fulfillment of their wants and needs. It is because of these situations that significance differences were observed on each dimensions and overall of mental health. It is important to be mentioned here that various researches have emphasize that mental health emerged as the most significant predictors of life satisfaction, whereas, Bray and Gunnell (2006) found life satisfaction and happiness was modestly associated with mental health. Thus, it seems that the result presented in table 4 clearly reveal that there is much relationship between life satisfaction and mental health among the aged men and women. In this context it is to be pointed out that there is several studies which indicate life satisfaction significantly correlates to health domains.

Before terminating the discussion it is important to stress on some of the observations experienced by the present researchers that during the period of aging people suffer from increasing social isolation or social disengagement. One type of social disengagement is less involvement with other people. This may be due to several reasons such as transfer of friends and acquaintances, deaths, moving in to a new place after retirement, as well as an increased interest in oneself. All these results in narrowing of social contacts, which is further narrowed due to decreased physical abilities and lack of transportation facilities. Their own family members are busy in pursuits of their own and have little time to spend with them which further increases the feeling of isolation in the aged living alone. It is an undoubtable fact that old age is a period when one is likely to feel useless and uncared for. This feeling of rejection and isolation is likely to increase further when the decision to live alone is not a matter of choice but enforced due to circumstances. Furthermore, mental health is now getting it's a deeper concern with some important positive characteristics of the aged men and women such as resilience and inner sense of coherence, the ability to make relationship to attach to others and to love the ability to think clearly including emotional matters, the ability to manage the emotions successfully and appropriately, and the capacity to have an accurate self concept and high self esteem thus in the recent past the field of global mental health have emerge and define as the area of study, research and practice that places a priority for improving mental health for all people world wide.

CONCLUSIONS

On the basis of the obtained results it is concluded that : Aged men and women in North Bihar, where from the sample has been drawn, have indicated favourable inclination toward the degree of perceived life satisfaction. Moreover, Significance of difference has been found between aged women and men in terms of their perceived life satisfaction.

Aged men were found to have a higher degree of perceived life satisfaction than their counterparts. On all six dimensions of mental health such as positive self-evaluation, perception of reality, integration of personality, autonomy, group oriented attitude, environmental competence and overall mental health between the aged men and women were found to be significantly different. In terms of mental health score in all the dimensions including total score aged men scored higher degree of mental health than aged women except in the 'positive self-evaluation', a dimension of mental health where women scored higher degree of mental health than men. When life satisfaction was correlated with mental health for both the group of aged men and women, life satisfaction was found to be a positive function of mental health for both the group of men and women. Observations have revealed the fact that all the people who live in North Bihar

from where the present sample has been drawn for the research endeavor, have unique and traditional life cycle, thus every one in that socio-cultural milieu have high social values and work ethics and greater sense of responsibility with whom they have their social and family affiliations. Instead of these there is a need to pay much more attention to the necessities of the aged women for maintaining sound mental health and healthy life satisfaction.

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COMPARISON OF MEAN AND INTRA-INDIVIDUAL VARIABILITY SCORES ON REACTION TIME AS INDICES OF NEUROPSYCHOLOGICAL DYSFUNCTION

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ABSTRACT

Previous studies have shown that intra-individual variability (IIV) in performance is an important indicator of neuropsychological functioning and neurological integrity. In the present study, the mean and IIV scores on reaction time (RT) were compared in order to find out which one was a more reliable index of neuropsychological dysfunction. A sample of 120 subjects was drawn from four age groups i.e. Adolescents (Group 1: 16 to 18 years); Adults (Group 2: 30 to 40 years); Older Adults (Group 3: 50 to 60 years) and Old aged (Group 4: 65 years and above.) ranging from 16 years to 65 years and above. Subjects were assessed on two measures i.e., reaction time task and AIIMS battery. Data was analysed by computing one way ANOVA and correlation. Analysis indicated that mean RT was a better index of neuropsychological dysfunction in comparison to intra-individual variability.

Keywords: Neuropsychological functioning, Intra-individual variability, Cognitive functions, and Neurobiological mechanism

INTRODUCTION

Researchers investigating neuropsychological functioning in individuals tend to examine their mean level of performance on different neuropsychological tasks. This type of research explains only the comparison across individuals of different age groups. However, such measurement assumes that individual's performance is stable over the short-term period. In 1991, Nesselroade explained in his research

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on life-span development perspective, that performance of an individual is in constant fluctuation.

Recently, the term intra-individual variability (IIV) has been used to represent different facets of within-person variability. IIV is the standard deviation which represents trial to trial variability in performance of a task over a number of trials. "Intra-individual variability is defined as changes that occur relatively quickly and over relatively short term frames (e.g. moment to moment; week to week) and are temporary or reversible" Nesselrode (1991).

However intra-individual variability in RT is a peculiarly neglected phenomenon in experimental psychology, as RT has been considered in terms of the subject's mean response time. However, recent researchers in differential psychology of RT have paid attention to intra-individual variability in RT. Researchers have found that increase in intra-individual variability in RT tasks predicted the degree of neuropsychological dysfunctioning (Hilborn, Hultsch & Hunter, Strauss, 2009; Hultsch, Hunter, MacDonald, & Strauss, 2005).

Hendrickson (1982) explained that IIV or inconsistency in RT is caused by random error or neural noise in the signals in the central nervous system. Some researchers reported that increase in IIV in cognitive functions reflect neuro-pathological changes associated with neurological aging and disease (Bonder, Buckle, Pogue, & Stuss, 1994; Li & Lindenberger, 1999). Several studies reported an increased IIV on RT in many conditions which affected the central nervous system, such as traumas, (Armilio, Craik, Murphy, Stuss, & West 2002), dementia (Hultsch, Hunter, Levy-Bencheton, MacDonald, & Strauss, 2000), or neurogenerative diseases like Alzheimer's, Parkinson disease (Burton, Hultsch, Hunter, Moll, & Strauss, 2006).

Researchers found that decrease in the level of performance and increase in inter-individual variability with age was associated with higher IIV in neurobiological mechanism (Hale, Myerson, Poon, & Smith, 1988; Welford, 1980). Older adults when compared with younger adults, exhibited greater IIV. Researchers reported that inconsistency across trials on RT tasks, increases with age (Anstey, 1999; Fozard, Hancock, Quilter, Reynolds, & Vercruyssen, 1994). Some researchers, however, have not observed an association of intra-individual variability among some cognitive domains such as reasoning, perceptual speed, and memory. Allaire & Marsiske (2005) explained that any observed inconsistency or IIV across measures may be due to shared underlying processes such as processing speed.

In Psychometrics, reaction time is considered to be a measure of cognitive processing speed. The speed of execution of mental processes needed for performing a task can be assessed by RT. Reaction time test is a simple and sensitive test which is a measure of how rapidly information can be processed and a response to it can be activated (Duncan, 1986). RT tests provide high

sensitivity for detecting fluctuations in neuropsychological efficiency. It has been known that as the individual ages, RT becomes more variable and longer. Some researchers implicated RT as the predictor for early detection of Alzheimer's disease and mild cognitive impairment (De Raedt, Gorus, Lambert, Lemper, & Mets, 2008). Neubauer and Knorr (1997) observed that the speed of information processing is significantly correlated with intelligence, especially in choice RT tasks.

Although IIV appears to be a meaningful indicator of an individual's neuropsychological dysfunctioning, one question often raised in the literature is whether it is necessary to examine IIV if it accounts for the same amount of inconsistency on neuropsychological functioning as mean level of performance. Researchers have found that IIV on RT tasks appears to be a better indicator for differentiating individuals with mild cognitive impairment and dementia from normal individuals, in comparison to mean RT scores (Burton et al., 2006; Bielak, Bunce, Hultsch Hunter, & Strauss, 2007). Strauss and his colleagues (2007) reported that intra-individual variability on RT tasks also appears to be beneficial in classifying the severity of neuropsychological dysfunction.

Previous researches show that neuropsychological functioning (NPF) varies with age. NPF tasks are very complex and lengthy. These are very time consuming as well as very complicated and at times the respondents are unable to perform all of them. Therefore, in view of the above the present study proposes to compare the efficacy of mean and intra-individual variability scores on RT tasks as indicators of neuropsychological dysfunction.

The objective of the present study was to compare Mean and IIV scores on RT among different age groups and study the relationship between Mean and IIV scores on RT with neuropsychological functions (NPF) across age.

METHOD

Design

To fulfil the objectives of the study a multi group design with four groups was used to examine the association between Mean and intra-individual variability scores on RT with neuropsychological dysfunction across four age groups.

Sample

A sample of 120 respondents was selected (age range: 16 years to 75 years). Variables such as educational qualification, health status were controlled by inclusion/ exclusion criterion. Participants were divided into four age groups. Group 1 (n=30; 15 women, 15 men) ranged from 16 to 18 years; Group 2 (n=30; 11 women, 19 men) 30 to 40 years; Group 3 (n=30; 10 women, 20 men) 50 to 60 years and Group 4 (n=30; 5 women, 25 men) 65 years and above. All groups were educated, however, Group 2 and Group 3 had significantly more education than the last group *i.e.*, Group 4. Although all the age groups had normal health,

the fourth age group in which respondents were above the age of 65 years, had some health issues like hypertension, diabetes and heart problems.

Tools

To obtain the demographic information (age, years of education, self-reported health information, self-rated health, perceived memory changes and self-reported chronic disease conditions) a semi-structured questionnaire was used.

Reaction time Apparatus: RT was assessed by RT apparatus, which consists of rectangular box with four lights on the respondents' panel, where half an inch below each light there was a pushbutton. On the experimenter's panel there was a start button. There was another switch with the help of which experimenter could select the light to be presented to the subject. After an auditory ready signal one of the lights was switched on by the experimenter. Subject was required to turn off the light as quickly as possible by pressing the pushbutton. Reaction time was recorded by the inbuilt chronoscope which provided a digital display on the experimenter's side of the instrument. For each subject 65 trials were taken in which 5 trials were catch trials. RT task was administered in 3 testing sessions, with an inter-test interval of about 4-6 weeks, scheduled over a period of 3 months. Mean and Standard Deviation scores were computed for each session.

For computation of IIV, deviation scores were calculated across the trials and three sessions.

AIIMS neuropsychological battery: AIIMS neuropsychological battery is a comprehensive battery used for both diagnosis and rehabilitation. It helps to understand the brain-behaviour relationship. It measures ten different primary scales; motor, tactile, visual, receptive speech, expressive speech, reading, writing, arithmetic, memory and intellectual processes. From out of these basic content scales, three other scales *i.e.* pathognomonic scale, Left-Hemisphere scale, and Right-Hemisphere scale can be constructed. In the present study the Total Neuro-psychological score comprising of the total of raw scores on all the above scales was used. The receptive speech scale is not included in the total score scale. The total number of items on the above scales are 200. Total Raw scores of 12 scales (motor, tactile, visual, expressive speech, reading, writing, arithmetic, memory, intellectual processes, pathognomonic, left-hemisphere, & right-hemisphere) were then converted into T-scores for each subject of different age groups.

Procedure

The participants were selected from college students/staff, and institutionalized aged population in Gurgaon and Rewari districts. Participants who voluntarily agreed to participate in the study were administered the three measures, *i.e.*

measure of personal information, measure of RT, and measure of neuropsychological functioning, at their residence.

RESULTS AND DISCUSSION

For the analysis, first of all the mean reaction time and the standard deviation are calculated. Mean reaction time is the measure of how fast the individual responds whereas standard deviation measures the intra-individual variability of an individual's reaction time. For the analysis of NPF raw scores of an individual are converted into T scores.

Table 1: Means RT, IIV and NPF scores of the four groups(n=30)

Groups	RT Scores	IIV Scores	NPF Scores
Group 1	.12963	.03230	55.17
Group 2	.13870	.03327	50.87
Group 3	.16679	.03569	57.97
Group 4	.18850	.04255	72.37
Overall	.15575	.03595	59.09

From Table 1, it can be seen that there is a progressive increase in the mean scores on RT and IIV, were the means of the first two groups are nearly similar and there is very slight difference while the means are progressively higher for the two higher age groups (3 and 4) which indicates that individuals above the age of 50 years are more are slower and more variable in their performance than the younger age groups. On the NPF score, the respondents up to the age of 50 years (Groups 1,2&3) appear to be similar, while the mean score of Group 4 is much higher. This indicates that respondents above the age of 60 years have more neuropsychological dysfunction.

To examine if there is any difference across age groups in RT, IIV, and NPF analysis of variance (ANOVA) was used and F values were shown in Table 2.

Table 2: Significance of difference among the RT, IIV, and NPF scores of the four groups.

Sr.No.	Variable	F Value
1	RT	32.614**
2	IIV	1.962
3	NPF	36.183**

**p<.01

The obtained value of F was found to be significant for RT and NPF. In order to determine which of the groups differed significantly, post hoc analysis was carried out by applying LSD.

The post hoc analysis of the three measures revealed that the mean RT score of Group 3 was significantly different from Group 1 (.04313) and Group 2 (.05902). The mean RT score of Group 4 was significantly different from all the three age groups. On the other hand, comparison of the IIV scores revealed a significant difference only for Group 4 with Group 1 (.01018) and Group 2 (.00930).

Table 3: Significance of difference between the RT, IIV, and NPF scores of the four groups.

Comparison groups	Mean Difference		
	RT	IIV	NPF
1 and 3	.04313*	-	-
2 and 3	.03410*	-	-
1 and 4	.05902*	.01018*	17.20*
2 and 4	.04999*	.00930*	21.50*
3 and 4	.01589*	-	14.40*

* $p < 0.05$

The mean differences between the NPF scores of Group 4 significantly differed from all the three groups which indicates that individuals who are above the age of 65 years have very high reaction time, which indicates that their cognitive speed is slow and they have more neuropsychological deterioration than any other age group.

In order to ascertain which of the two measures *i.e.* mean RT or IIV was a better index of neuropsychological functioning, correlation was computed for both the scores with NPF scores.

Table 4: Correlation between RT- NPF and IIV- NPF.

Groups	Correlation Between	
	RT & NPF	IIV & NPF
Group 1	.312	-.193
Group 2	.281	.132
Group 3	-.274	-.219
Group 4	.375*	.409*
Overall	.484**	.287**

* $p < 0.05$; ** $p < 0.01$

After ascertaining that obtained data met the requirements of Pearson's correlation, correlations were computed between the RT-NPF and IIV-NPF scores. The obtained correlations are reported in the Table 4. For RT-NPF and IIV-NPF, correlations were significant only for the Group 4 *i.e.* .375 and .409 respectively. Overall correlations for RT-NPF (.484**) and IIV-NPF (.287**) were also computed and both were positively correlated.

When correlations are compared it can be concluded that both RT and IIV are equally effective in indicating gross neuropsychological dysfunction but as RT has shown high correlation with NPF as compare to IIV for the total sample, it indicates that RT, or mental speed is a better index of neuropsychological dysfunction. Therefore, present study indicates that mean RT is a better index of neuropsychological dysfunction rather than IIV.

The present results are consistent with previous researches (Anstey, 1999; Fozard et al., 1994; Hogan, 2003; Dixon, Hultsch, & MacDonald, 2002), which reported that older adults show greater intraindividual variability in RT performances than younger adults. The correlations between IIV and NPF observed in the total sample supports the view that increase in IIV could indicate the integrity of central nervous system and can be considered as a risk factor for mortality (Alexander, Binns, Murphy, & Stuss, 2003; West et al., 2002).

In present study an attempt was made to find out that whether Mean RT or IIV on RT task is a better index of neuropsychological dysfunction. Both mean RT and IIV are significantly correlated with NPF scores in the 65+ age group and there is very little difference in the two values. However, correlation for the total sample is much higher for men RT. Therefore, it can be concluded that mean RT is a better index of neuropsychological dysfunction.

IIV in RT does not appear to be a very good index of neuropsychological dysfunctioning. However, mean RT, specifically visual complex RT, was found to be a good index of neuropsychological dysfunctioning. Thus, it appears that a single measure of mean Reaction Time could be profitably used for assessing gross neuropsychological dysfunction.

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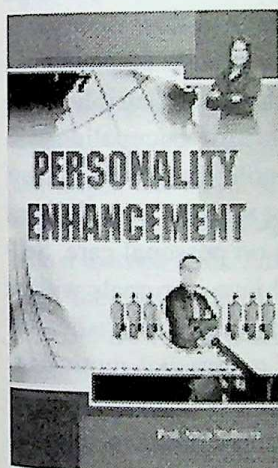
BOOK REVIEW

PERSONALITY ENHANCEMENT

By Prof. Anup Malhotra

Global Vision Publishing House, New Delhi, 2013

Rs. 1200/-, ISBN: 978-81-8220-580-2



The present book *Personality Enhancement* edited by Prof. Anup Malhotra is a collection of various essays that concentrate on the theories and methods of personality development. The first chapter acts as an introduction that defines the importance and the role of personality development in the cultivation of the character of an individual. Liza Sharma aptly defines personality as an outward exposition of the inner man. The process of personality development starts right from a child's birth that enhances the behavioural traits like communication skills, interpersonal relationships and our attitude towards life. Besides this, there are some other personality traits such as body language, self-confidence, positive attitude, decision-making and interactive skills that are the key ingredients to enhance the all-round personality.

Part I elucidates the concept of self and the relevance of other social or environmental factors responsible for the formation of self-image. It can be said that the self-image is not entirely based on one's conception of oneself rather it is shaped and reshaped by various kinds of outward forces. The process of socialization instills confidence in a person which is the basic element in the development of one's personality. It would be no exaggeration to state that self-confidence is the foundation stone that can bear the burden of all other traits of personality development. But it becomes a necessity on the part of a person that this foundation of self-confidence must be strong enough so that it can tactfully

hold and strengthen the grip of other bricks of personality development as well. Self-confidence is important in all walks of life whether it being business, success, social interaction or happiness. The thing that must be noted is that self-confidence remains a powerful weapon of personality till it is balanced but the moment it becomes more bulky, it is labeled as over-confidence which can lead a person towards his own destruction. So it needs to be balanced properly. Life moves around enjoying the joyful as well as sorrowful moments whereby those people who take or observe their life experiences negatively tend to destroy not only their own personality but of others' as well, whereas on the other hand the people having positive attitude to life easily adapt themselves in any of the circumstances and embellish theirs as well as other's life with all happiness. There are five steps to happiness enlisted in the fourth chapter that can help a person to adopt positive thinking towards life. The soft-skill programmes that are undertaken to improve personality must be based on anecdotes. Secondly, injecting humour in the sessions increases participation and makes the sessions more interactive and interesting. In order to make the participation more interactive demonstrations must also be implemented.

Part II is devoted to different attitudes, motivation and self-motivation. Right attitudes are responsible for success. Right attitude means to follow the right or the ideal path. There are some "Do's and Don'ts" which must be taken care of. A right attitude also means to arrive at right decision or to act sensibly at the right time. Chapter seven tries to analyze the relationship of occupation with women ageing in Nashik city through the statistical data collected by the author. The conclusion at which she arrived is that many working women have different personalities and it has nothing to do with their spending on personal care. Self-motivation being an important mechanism helps us to achieve our goals without any outward motivation. It strengthens the very spirit which nourishes our confidence. Basically, motivation is of two type *i.e.* self or internal motivation, and external motivation. Motivation is the fuel of life. The word "motivation" is derived from the Latin word "movere" that means "to move" and in this way "motivation" refers to motives in action. It is actually concerned with personal energy directed towards the achievement of particular goals. It must be implemented in the teaching-learning process which intrinsically motivates students to retain information and concepts for a longer duration.

Part III, *i.e.* "Leadership Quality" is entirely focused on leadership development that is equated with self-development. Leadership is the capability to guide and influence the fellow beings and colleagues. This quality must be used to boost up the confidence of others, to inspire people to carry on despite the repeated failures and to energize them to work well. It must radiate only the positive energies. An ideal leadership is that which is based upon the foundation of selflessness. Leadership is divided into five types, *i.e.* Autocratic/Authoritarian,

Participative/Democratic, Laissez faire/Free Rein, Transactional and Transformational, etc. It is a sum total of the following soft-skills such as communication skills, listening skill and motivation skill. A leader must play a pivotal role in maintaining the unity in the team. For the clarity of leadership qualities, the leadership traits of Osama and Obama have been compared in chapter sixteen. Next chapter negates the old saying that "a leader is born, not made". Due to the modern management system it has been proved that leadership is an ongoing learning process that gets refined in the course of time.

Part IV focuses itself on the topic "Emotional Intelligence" by enumerating its importance in the present scenario. Emotional intelligence is the conscious management of our own emotions which includes perceiving emotions, facilitating thought with emotions, understanding and regulating emotions. It influences the actions of a leader, influencing thereby the work done as well as the result. Although business meetings are carried out using the modern technological and scientific devices but still the success of a company is not based on possessing all these high-tech accessories rather it is due to the emotional ethics or intelligence. It is because the Emotional Quotient is based on the concept of love and spirituality in an organization which is the minimal necessity even in management. The next chapter in this section aims at tracing the ancient ways to develop emotional intelligence in our epics.

Part V makes us aware of the assertive behaviour and behaviour skills. It explains various features and types of human behaviour and how it must be tackled and improved upon. Chapter twenty three tends to describe assertive behaviour and why is it necessary to be assertive? This is not a born quality but is acquired with a learned skill. And an individual must be trained to have an assertive identity from the early stages of his personality development so that he/she may easily face the difficulties without feeling any anger and resentment. The next chapter defines what it is to be assertive and why is it needed? It is essential, it says, for a person to fight and face his/her own battles and problems by removing all kinds of fears from his/her mind. It discusses the three styles of behaviour – passive, aggressive and assertive and the benefits of being assertive. Chapter twenty five discusses how the gender influences the assertiveness, the differences in assertive behaviour of males and the females and the reasons behind it. It also evaluates the assertive and aggressive qualities in males and females their score count. The next chapter examines the nature of the behaviour of consumers towards their environment and proposed a model and hypotheses how various factors such as notions, changes and attitudes and other intervening variables influence the intentions and decisions of the consumer while purchasing environmental products. Then this section provides a view in the neurological processes and how our senses may affect our states of mind and how their "grooming" may help in mastering our behaviour. The last two chapters devote their study on the

impact and use of IT applications and internet and E-learning in the maintenance of good behaviour and better personality of an individual in a society.

Part VI focuses on the topic "Personality and Performance" describing how the college education may help the students in the acquirement or acquisition of necessary skills to find employment in better companies. It mainly deals with the benefits of effective business and management skills acquired in good Business schools or colleges and instilling good soft skills, team-spirit and skills in management and computer training etc. in the aspirant students. It also attempts to assess various challenges faced by an organization, and analyze various practices that are prevalent in business organizations to retain and motivate their key staff.

It is a comprehensive collection, largely exhaustive in scope and application. However, human personality cannot be gauged on the basis of tests, attributes, physical appearance or mental acumen. Life keeps on adding new experiences, episodes, and ideas making the personality multi-layered. The book is an effort to analyze these layers. In a cogitative manner, the writers have endeavoured to assess all the facets of personality and how different methods can accentuate its optimum potential. The book has delved on various segments such as working women, leadership qualities, the importance of E. Q., the gendered perspective of assertiveness and issues related to the corporate domain. It would be valuable to include chapters on the youth, especially those from the deprived section of society as personality enhancement is a much expedient tool for them. So also a chapter dedicated to non-working women and personality enhancement would be a welcome edition.

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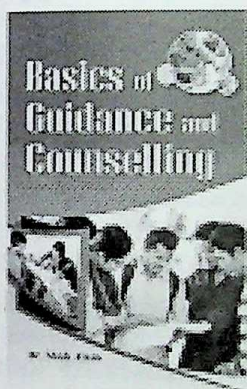
BOOK REVIEW

BASICS OF GUIDANCE AND COUNSELING

By Dr. Shah Alam

Global Vision Publishing House, New Delhi, 2014

Rs. 1200/-, ISBN: 978-81-8220-624-3



Guidance and Counseling a helping profession desires to bring about changes in knowledge, attitudes and behaviour of individuals employed in different sectors. This book having 25 chapters has been classified into four important parts. Dr. Alam, very prudently has made divisions in this books beginning from guidance (Part-I), counseling's (Part-II), psychotherapy (Part-III) and psychological testing (Part-IV).

Part-I deals with the basics of guidance as about it historical development, goals and purposes, Principles and procedures and what type of activities should be accomplished in order to make any guidance programme effective whether it is in some educational set-up, hospital or some corporate house.

Counseling (Part-II) in itself is a complete and informative section. It in encompasses processes and types of counseling, special areas of counseling *i.e.* Rehabilitation. Drug abuses, depression, handicapped segment. The entire planning and suggested therapeutic models are very simple and easy to comprehend.

Section III focuses on various theories and approached of counseling. All the therapies focusing upon their view of human nature, goals, processes and procedures are explained along with their recommendations and limitations systematically.

Part-4 focuses on the assessment part, *i.e.* Nature of psychological tests, their uses and characteristics. Non testing techniques that are currently in vogue have also been dealt with very meticulously.

This book is a significant contribution for the students, researchers, academicians and practioners working in this field. The book is informative, knowledgeable and perfect piece of wisdom in terms of content and parsimonious language. I hope readers would find the book quite beneficial and quick to understand.

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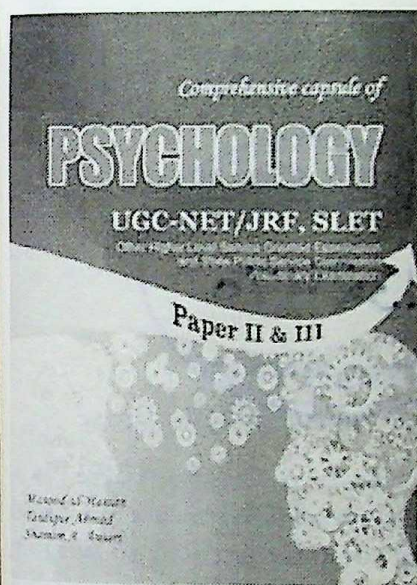
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About the Book

The present effort offers students a very clear and comprehensive understanding of psychology which has a very broad spectrum of the various phenomena and concepts. The students of psychology after going through this book namely, 'Comprehensive Capsule of Psychology' can very easily prepare themselves for the various competitive examinations conducted by Public Service Commissions, UGC/NET/JRF/SLET and other Public and Private Sector Examinations.



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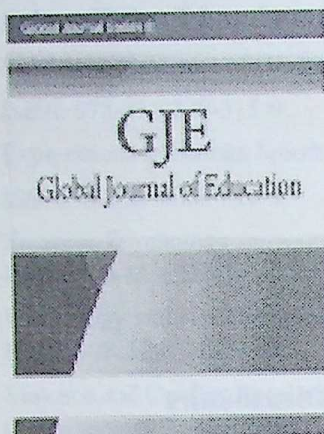
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